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OF

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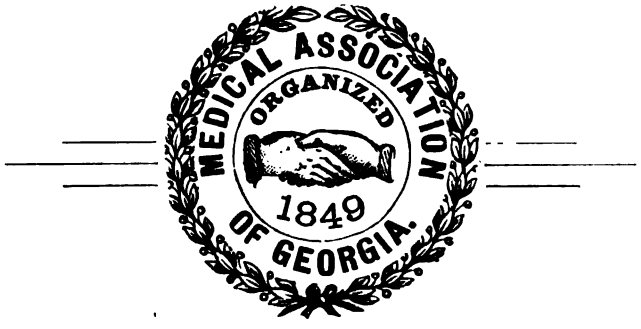
THIRTY-SEVENTH ANNUAL SESSION.

1886.



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"*Resolved*, That this Association shall not be considered as indorsing views of authors of papers published in connection with the Transactions, unless definitely so indorsed in the proceedings of the Association.

"*Resolved*, That the above resolution appear annually upon the title page of our published proceedings."—*Transactions*, 1873.

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THE *next meeting of the* MEDICAL ASSOCIATION OF GEORGIA *will convene in Atlanta on the third Wednesday in April,* (20*th*,) 1887.

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EXPLANATORY NOTE.

Two papers which were read and discussed at the last meeting of the Association do not appear in this volume. One of them, by Dr. Theo. Lamb, of Augusta, was published in a medical journal, and therefore could not appear in the Transactions without violating an established rule of the Association. The other, by Dr. Joseph P. Logan, of Atlanta, was never furnished the committee, he having declined to do so.

As the size of the book is limited by the amount of funds in the hands of the Treasurer, a number of papers furnished the committee do not appear.

JAMES A. GRAY, M. D., Chairman Committee.

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Gynæcology.—A. G. Whitehead, W. H Doughty Jr H. F Campbell.

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R. J. NUNN,
Chr'n. Com. on Prize Essays.

MINUTES

OF THE

MEDICAL ASSOCIATION

OF GEORGIA.

Thirty-Seventh Annual Session.

FIRST DAY—MORNING SESSION.

AUGUSTA, GA., April 21, 1886.

The Medical Association of Georgia convened this day at 10:30 o'clock, in Clara Hall, and was called to order by the retiring President, Dr Eugene Foster, of Augusta Dr. Foster introduced Rev. C. C. Williams, of St Paul's Episcopal Church, of Augusta, who in the most impressive manner made the following prayer:

Almighty God, of whom alone cometh Thy blessing of health, and who hast created medicines out of the earth to heal our sickness, we beseech Thee to be present with these, Thy servants, whom Thou hast called to be physicians of the bodies of men. Of Thee only cometh all wisdom and knowledge of wise inventions, and of Thee only the skill and the patience and the power to heal. Prosper, we pray Thee, the consultation of these, Thy servants, here assembled upon their mission of mercy to mankind. Endue them with the wisdom which cometh from above. Preserve them from all error, passion or prejudice. Ennoble through their service the gracious art which ministers to suffering humanity. And as Thy blessed Son did reach out His pity and compassion to the crippled, the diseased, and even the dead, restoring them to health and life, so bless the mission of these,

Thy servants, as they minister to those committed to their care. That, seeking Thy glory and loving their fellow-men, they may attain the reward of Thy faithful servants and be made partakers of everlasting life, through Jesus Christ our Lord. Amen.

Dr. Eugene Foster then introduced J. R. Lamar, Esq., who delivered the address of welcome in behalf of the physicians of Augusta. He said:

Mr. President and Gentlemen of the Association—Augusta is the seat of the Medical College of Georgia and the home of the profession in this State, but if this were not so I hope it will not be deemed improper if I say that if there is any one thing in this world doctors can afford to do without it is a welcome. Men whose business it is to visit, and whom people are so desperately anxious to see that they pay you by the visit, are in no need of being assured that they are indeed most heartily welcome It is your daily experience to be summoned at all hours of the day or night, at such fashionable visiting hours as 2 o'clock in the morning, at sun-up or early breakfast, to come and to come at once. If by any chance you happen to be away from home, the messenger shows how much in earnest he is in having you come by going across the country in search—to take you by force, if necessary. And when you arrive there is no long waiting at door or in parlor, as other visitors are forced to do, but you are met in the middle of the road, or at the gate, with an exuberant demonstration of pleasure at your arrival and hurried into the presence of the family. And very often we find that there is nothing in the world the matter with anybody. It must have been a skillful little ruse to get a visit from the doctor. I ask, in view of such daily receptions, would it not be worse than carrying coals to Newcastle to welcome men who have such a surfeit of hearty welcome as these?

But it may be that you regard these hospitable greetings as paid you as doctors and not as men. And therefore your brethren in this city have commissioned me to welcome you, not only as doctors, but as gentlemen—as members of this Association, united for high and useful aims; as men of distinction who have achieved honorable success in alleviating distress and removing suffering from those who come under your care.

It is indeed a pleasure to receive the Medical Association into our midst We are all interested in medicine, and we all get sick, or we are all akin to people who do get sick, and while it is understood, as a matter of course, that no well-informed doctor who has any regard for his own health will ever take his own physic—and while it is one of the privileges of strong, vigorous and healthy people to cavil at medicine and argue against its use, it is wonderful what a change comes over the spirit of their doubt when they get sick They send for the doctor at once, and, without a single questioning or investigating chew, swallow his pills. They find that no man has a constitution strong enough to be able to lose interest in doctors. There is, in fact, no one thing in which the citizens of this

State are more concerned than in the skill of its physicians and their ability successfully to cope with disease. Unfortunately, however—and it is a misfortune doctors appreciate more than anyone else—the domain of medicine does not lie in the territory of pure thought. You cannot reason from premise to conclusion. You cannot apply logic to devise a means of curing the sick. Even the physician and chemist combined could never have told by a mere analysis of quinine that it would in some cases cure fever; that could only be found after a trial. If a new disease, with new symptoms, should be added to the catalogue of woes, study and reasoning in the closet could never find the remedy. It is only by a trial, experiment and actual experience that the medical world can be made to advance. Every step it has taken, every disease it has mastered, every remedy it has discovered, every treatment it has adopted, every surgical instrument and every bandage in use are the direct and immediate outcome of the work and actual experience of some doctor in the past. So true is this that it can safely be said medicine never began rapidly to advance until it devised a means of letting doctors rapidly learn of what other doctors had done. And since the discovery of printing no one measure has contributed to this as the multiplication of these associations over the nations in State, county and city, and in the civilized nations of earth. Here face to face, under the close cross-examination of men familiar with the facts, new ideas are received, new facts learned, old prejudices removed, new plans adopted and the clear light of truth comes out for the benefit of the sick and suffering.

We welcome you, therefore, not only for yourselves, but for your work's sake, we give you the freedom of the city. We open to you wide our doors—we welcome you to our homes. And while the doctors of this city have not authorized me to say so, I feel that I am safe in saying that we would welcome with delight the news that the Medical Association of Georgia, at its meeting in Augusta in 1886, had discovered and published an infallible way of making good health catching.

Dr. Foster then introduced C. H. Cohen, Esq., who delivered the address of welcome in behalf of the city of Augusta as follows:

Mr. President and Gentlemen of the Medical Association of Georgia:

The pleasing duty of conveying to you the message of the city of Augusta that she opens wide her every gate, raises high her every portcullis, and bids you welcome, thrice welcome, in her midst, has been conferred upon me.

The casket containing the keys to her strongest fortress are laid at your feet, and the freedom of the city is tendered to you as the successful warriors battling for humanity's welfare in the contest of life.

We grant you every privilege, we promise you every immunity and we pledge you every franchise contained in the city's charter.

The liberality illustrated by these excessive tenders, we are assured, will be accepted in the spirit in which they are offered; and let me express the hope that while you are enjoying the manifold beauties of our city, you will not seek for the physical weakness of our people, but if your talent and genius should locate them you will at least not prescribe for them.

We boast the possession in our midst of some of your ablest members, and we feel confident that we can pass to that other world at the accepted time with their aid alone, without depending on any outside influence

Living as we do in a city who claims as its most precious heritage the memories of the noble members of your profession who have been called away, and containing as it does others whose reputations have become widespread and national, we have learned to feel grateful that our lives have fallen under the shadow of the ægis of those whose skill is our dependence and whose powers are our safety.

And now, sirs, with sentiments of unfeigned pleasure and pride, we open wide our hearts and bid you read in letters of no uncertain character, no doubtful meaning, welcome, thrice welcome.

Dr. Foster then introduced Dr. E. H. Richardson, who responded to the welcome made by Messrs. Lamar and Cohen. Dr. Richardson said:

Mr. President and Gentlemen of the Committee:

In behalf of my *confreres* of this Association, it affords me very great pleasure to express to you our profound thanks for the very graceful and warm-hearted welcome that you have just extended us. Our hearts respond most cordially to your kindly greeting. For the fifth time since our organization we find ourselves convened within your classic halls, and I assure you that we come to your beautiful and charming city with unfeigned pleasure.

From the natal hour of the organization of the Medical Association of Georgia, the city of Augusta has furnished to our ranks some of her best blood—some of her best talent. For more than half a century, as a commercial centre and mart, Augusta has stood without a peer in this section of country. She also enjoys the proud prerogative of having produced some grand and chivalric characters. But while the roster of Augusta's great sons is an exceedingly honorable one, the crown and glory of her loins is the fame and renown of her M. D's. And from the galaxy of her worthies it is an unspeakable unction to our hearts to find still among you the illustrious and beloved Campbell, who, having carved his name in undying letters of gold high upon Glory's shaft; having achieved the richest laurels of his profession, still lingers among us in the full fruition of his well-earned fame. The splendor and grandeur of his career evoke our most enthusiastic admiration and challenge our profoundest respect. His presence with us to-day, his siren voice, the charm of his perennial smile, I feel is a benediction and inspiration to us. Let us not wait until death has sealed his eye-lids in sleep ere we do homage to his character and worth. Long may he abide with

us, and around his declining years may the golden shadows of evening sweetly and tranquilly fall, and when summoned from earth to heaven's "starry dome" angels will delight to bear him a crown of glory!

Taking our most worthy retiring President, Dr. Eugene Foster, as an example from the list of your young physicians, we are warranted in concluding that your atmosphere hasn't "lost its cunning" in making doctors. No member of the medical profession, living or dead, has ever advanced to the foremost ranks in the profession with greater rapidity than has Dr. Foster. He is eminently fit to grace and adorn any position within the gift of the profession, from the Presidency of the American Medical Association down. I expect to live to see him fill that position, and I don't expect to live always either, not on this sphere.

But, gentlemen, in looking over this assembly we are painfully reminded of the absence of beloved and long venerated faces that have been wont to meet with us upon these annual convocations; and so many of us all over this land have sat at the feet of these departed Gamaliel's and drank from their lips precious words of wisdom and truth, that it will not be invidious to mention the names of that honor-crowned trio of medical *savants*, Dugas, Ford and Eve; when this Association last met in your halls they were with us. But they no longer cheer us by their presence. The insatiate archer, Death, has removed them from their places here, and they have entered the realm of the stars. To them the couplet,

"That life is all a mist,
And in the dark our fortunes meet us,"

did not apply. Gently and sweetly and triumphantly they "fell asleep" in the radiant sunset of grand and sublime lives! And pausing for a moment in life's conflict—looking back upon memory's fast receding but jewelled shores, bringing into mental review the record of their God-inspired and God-directed lives, I feel, sirs, that with the birds of spring I fain would sing a song and scatter flowers o'er their tombs that might live and bloom perennially, as I shall embalm and enshrine within my heart the recollection of their gentle and benignant faces!

"Around thy tomb, oh, man divine!
Where soft thy hallow'd brow reposes,
Long may the deathless ivy twine,
And summer spread her waste of roses!"

Gentlemen of the committee, we are yours most truly. To come within the borders of a city so distinguished for the culture, attainments and virtue of her people we esteem it no small privilege. And I but voice the sentiment of the Association when I assert that we expect the thirty-seventh annual session of the Medical Association of Georgia to be eminently successful, and to be characterized by both concord and harmony.

Gentlemen, without mental reservation, into your tender, loving arms we very confidently commit ourselves, only begging, in the language of one of your most eminent sons, "that you, in mercy, spare our lives."

Dr. E. C. Goodrich, chairman of the Committee of Arrangements, reported the following programme:

Meeting daily at 10 a. m; adjourn at 1:30. Afternoon at 3:30; adjourn at pleasure of the Association. Dr. Henry F. Campbell will give a reception from 8 until 11 o'clock on Wednesday evening. A banquet will be given Thursday evening at the Planters' Hotel; that he had received an invitation from the Mayor to take them up the canal to view Augusta's magnificent water power, but that he had declined for want of time.

The retiring President, Dr. Eugene Foster, arose to introduce his successor, and expressed his thanks to the Association for the honor conferred on him during the past term, and said it was a great pleasure to announce that he left the chair with the Association out of debt and marked with unusual prosperity. The credit for this he assigned to the efficient Treasurer and Secretary, Drs. E C. Goodrich and James A. Gray. Dr. Foster was exceedingly happy in his closing remarks, and averred that the crowning honor of his office was to introduce his distinguished, genial and popular successor, Dr. Richard J. Nunn, of Savannah. Dr. Nunn then delivered a most interesting inaugural address, which was listened to most attentively by all present. [See Appendix.]

The Committee of Arrangements reported the following gentlemen present, duly registered and entitled to participate in the deliberations of the Association.

[Names of new members afterwards added.—SEC.]:

T. L. Lallerstedt, Panola; K. C. Divine, Atlanta; Mark H. O'Daniel, Milledgeville; G. W. Mulligan, Washington; T. S. Powell, Atlanta; Charles H. Hall, Macon; H. McHatton, Macon; W. D. Bizzell, Atlanta; W. Z. Holliday, Harlem; E. W. Lane, Scarboro; William F. Holt, Macon; E. C.

Goodrich, Augusta; W. S. Elkin, Atlanta; A. G. Whitehead, Waynesboro; R. O. Cotter, Macon; W. T. Hollingsworth, Madison; J. W. Duncan, Atlanta; J. D. Herman, Eastman; J. F. Cole, Carrollton; L. M. Jones, Milledgeville; George C. Hummel, Savannah; C L. Sample, Cannoochee; R. H. Taylor, Griffin; A. W. Griggs, West Point; S. B. Hawkins, Americus; W. W. Fitts, Carrollton; R. J. Nunn, Savannah; R. H. Hightower, Dublin; Robert B. Barron, Clinton; J. A. Beasly, West Point; George H. Winkler, Augusta; William A. O'Daniel, Laurens Hill; W. H. Doughty, Augusta; W. H. Doughty, jr., Augusta; A. S. J. Stovall, Elberton; W. B. Standifer, Blakely; P. H Thompson, Bluffton; Hunter P. Cooper, Atlanta; L E. Borcheim, Atlanta; Thomas R. Wright, Augusta; J. A. Callaway, Milledgeville; H. H. Smith, Augusta; A. J. Logan, Americus; Eugene Foster, Augusta; W. W. Battey, Augusta; J. R. Henderson, Sun Hill; James A. Gray, Atlanta; Joseph P. Logan, Atlanta; M. G. Hatch, Tennille; J. D. Wright, Louisville; J. C. Mathews, Rogers; M. P. Deadwyler, Elberton; J. P. Gwyn, High Shoals; George A. Wilcox, Augusta; T. S. Fortson, Washington; W P. Ponder, Forsyth; Hiram Smith, Augusta; William Abram Love, Atlanta; V. H. Taliaferro, Atlanta; J. B. Morgan, Augusta; W. H. Baxley, Hephzibah; A. H. Baker, Augusta; C. P. Speir, Wadley; William H. Harrison, jr., ———; Samuel C. Benedict, Athens; J. E. Green, Augusta; W. F. Westmoreland, Atlanta; J. D. Barnett, Rayton; A. W. Calhoun, Atlanta; Theo. Lamb, Augusta.

By Dr. G. W. Mulligan:

Resolved, That the clergy, visiting physicians and the bar be invited to seats on the floor.

Adopted.

The President appointed Drs. J. P. Logan, A. G. Whitehead and Eugene Foster, Censors.

The report of special committees being in order, the President called for the report of the Committee on Loeating the Association.

Dr. Wm. F. Holt, of Macon, made the following report, which was received and adopted:

The committee appointed to inquire into the advisability of permanently locating the Association have had the matter under careful consideration, feeling that the contemplated change was of vital importance to its progress and welfare. After a free interchange of views your committee are unanimously of the opinion that it would be inexpedient and detrimental to the best interest of the Association.

WM. F. HOLT, Chairman,
A. G. WHITEHEAD,
R. J. NUNN,
G. J. GRIMES,
EUGENE FOSTER,
ROBERT BATTEY,
H. V. M. MILLER.

On motion of Dr. W. D. Bizzell, of Atlanta, the President appointed the following committee to consider the several recommendations embodied in the President's address:

W. D Bizzell, C. L. Sample, S. B. Hawkins, J. A. Beasly, C. H. Hall, E. H. Richardson, M. P. Deadwyler, A. G. Whitehead.

The President announced that Dr. W S. Little was present as a fraternal delegate from the Philadelphia County Medical Society and introduced Dr. Little to the Association.

The President called Dr. Wm. F. Holt, of Macon, to the chair and made the following report of the Committee on Prize Essays, which was adopted:

To the President and Members of the Medical Association of Georgia:

GENTLEMEN—The Committee on Prize Essays has during the past year received one essay, which, although elegant in diction, pleasant in style and interesting in matter, is wanting in that novelty of conception or originality of investigation which, in the opinion of your committee, should characterize a production which this Association would be willing to proclaim to the world as, in its esti-

mation, to be worthy of the position of a prize essay. Your committee has therefore decided to withhold the prize.

The amount of the Prize Essay Fund in the hands of your committee at the last meeting was $84.75, which was not sufficient to purchase a bond, and it was therefore invested on call at 4 per cent. and now amounts to $88.14.

R. J. NUNN, *Chairman.*

The report of the Committee on Medical Legislation was called for. The Secretary stated that the chairman of the committee, Dr. H. V. M. Miller, was not present, but that he had requested him to state to the Association that everything had been done to prevail upon the Legislature to pass a law providing dissecting material for medical colleges in this State, and the paying of adequate compensation to experts. Both bills failed to pass. Dr. Miller asked to be excused from further services on that committee, urging as his reason that the Legislature will not pass the bills.

The President stated that the committee would be continued, and not knowing any one who could so ably fill the place Dr. Miller would remain chairman.

The Board of Censors reported favorably on the following named applicants for membership in the Association, and they were elected unanimously:

Drs. Henry Wile, Atlanta; C. H. Richardson, Montezuma; L. E. Borcheim, Atlanta; Virgil O. Hardon, Atlanta; Hunter P. Cooper, Atlanta; Theo. Lamb, Augusta; Jas. B. Morgan, Augusta; P. H Thompson, Bluffton; W. B. Standifer, Blakely; F. M. Usry, Dearing; Geo. H. Winkler, Augusta; A. S. J. Stovall, Elberton; Wm. A. O'Daniel, Laurens' Hill; W. G. England, Cedartown; H. H. Smith, Augusta; Geo. H. Wilcox, Augusta; J. S. Sego, Augusta; W. H. Baxley, Hephzibah; J. S. Fortson, Washington; W. F. Westmoreland, Jr., Atlanta; C. P. Spier, Wadley; J. C. Mathews, Rogers; W. H.

Harrison, Augusta; J. E. Green, Augusta; J. P Davis, Tennille.

Reports of Sections were then called for.

First District, no report on Practice. Dr. Geo. H. Stone, of Savannah, made report on Surgery. The report on Gynecology was made by Dr E. W. Lane, Scarboro.

No report from the Second.

Third District, no report on Practice or Surgery. Dr. T. F. Walker made report on Gynecology.

Fourth District, report on Gynecology by Dr A. W. Griggs, West Point. No report on Practice or Surgery.

Dr. James A. Gray made a report on Surgery for the Fifth District. There was no report on Practice or Gynecology.

There were no reports from the Sixth, Seventh, Eighth, Ninth or Tenth Districts.

The Association adjourned to meet at 3:30 o'clock.

FIRST DAY—AFTERNOON SESSION.

The Association was called to order by the President at 3:30 o'clock.

Voluntary papers were called for, to be read by title and afterward to be called up and read at the pleasure of the Association:

Dr. J. P. Logan, Atlanta, "The relation of the medical profession to the use and abuse of alcoholic liquors." Made special order for to-morrow at 11 a m.

Dr. R. O. Cotter, of Macon, "Syphilis of the eye and ear."

Dr. Eugene Foster, of Augusta, "A review of antiseptic midwifery."

Dr. Thomas R. Wright, of Augusta, "Surgical cases."

Dr. G. W. Mulligan, of Washington, "Stricture of the œsophagus in a child two years old."

Dr Geo. C. Hummel, of Savannah, "Pathology and treatment of gonorrhœa."

Dr. W. H Doughty, jr, of Augusta, "Use of cocaine in vesico-vaginal fistula."

Dr Theodore Lamb, "Importance of the early recognition and treatment of pleuritic effusions—the dangers of delay and routine methods."

Dr. Henry Gaither, Oxford, "Synopsis of country practice a half century ago."

Dr. A. G Whitehead, of Waynesboro, "Is it only a coincidence?"

Dr. L. E. Borcheim, of Atlanta, "Causes and treatment of infant's diarrhœa."

Dr. H McHatton, of Macon, "Malarial homoglobinuria"

Dr. Robert Battey, of Rome, "Anticepsis in ovariotomy and Battey's operation. Seventy consecutive cases with sixty-eight recoveries and two deaths."

Dr. W. O'Daniel, of Bullards, "Exanthematous or eruptive fevers."

Dr. R. J. Nunn, Savannah, narrated a case of poisoning by a patent medicine called Ext. Picus Porleana. He also exhibited and gave the history, uses, etc., of the following new remedies: Hippurate of lime, hippurate of lithia, hippurate of soda, hippurate of potass., hippurate of ammonia, benzoate of caffiene and soda, salicylate of caffiene and soda, cinnamylate of caffiene and soda, sulphate of thallin, tartrate of thallin, antipyrin, kefir and kefir koumiss, terebene, terpinhydrat, cannabinon, arbutin, hydrochinon, iodol phenolphtalein, urethan, hydronaphthol, pyridin, sulphate of spartein, hypnone, lanolin, liq. ferri. albuminat, ferri. oxydate amell, sulfanilic acid.

He also showed some entozoa (filaris) from the blood vessels of a dog, and narrated three cases of intestinal obstruction, presenting a pathological specimen from one of them.

On motion, the papers of Drs. Henry Gaither, R. O. Cotter and T. R. Wright, already reported by title, were called up and read.

The paper of Dr. K. C. Divine, "Giant Cell Sarcoma," which was included in the report on Surgery for the Fifth District, was also read.

On motion, the Association adjourned to meet at 10:30 o'clock to-morrow morning.

Dr. R. J. Nunn, of Savannah, made an extemporaneous address on the use of ramie as a dressing in surgery and gynecology; also on the value of ethereal extract of roasted coffee for deodorizing iodoform, and on the use of pastiles (medicated, plain or hollow) for giving vapor baths or furnishing vapors for inhalation.

SECOND DAY—MORNING SESSION.

The Association was called to order by the President at 10:30 o'clock.

The minutes of the previous day were read and approved.

The Secretary read the following letter from Dr. K. P. Moore, of Macon:

Dr. James A. Gray, Secretary of the Medical Association of Georgia:

DEAR SIR—For seventeen consecutive years I have not missed a session of the Association, and have come to look for its coming as an annual love-feast. I have hoped all the time up till to-night to be able to go, but stern and insurmountable duties will, I fear, prevent my going over to Augusta. I hope to be able to get off to-morrow night, and be in the Association Thursday morning, but

if I should not, please express my regrets to the Association, and my best wishes for a profitable, pleasant and harmonious meeting.

Very respectfully and fraternally,

K. P. MOORE.

MACON, GA., April 20, 1886.

The Committee on Publication presented the following report, which was referred to the Auditing Committee, consisting of Drs A. G. Whitehead, Wm. F. Holt and R. H. Taylor:

To the Medical Association of Georgia:

In accordance with a resolution adopted at the last meeting of the Association, a contract was made with the *Atlanta Medical and Surgical Journal* to publish the Transactions of 1885 in the *Journal*, and furnish one copy regularly during the year to each member of the Association, the *Journal* to pay all expenses of the Association, such as postage, stationery, etc., used by the President, Treasurer and Secretary, for which the Association agreed to pay the *Journal* $2 per capita.

This work has been done to the satisfaction of your committee, and in addition to furnishing the *Journal* to the members as required by contract, we find that the *Journal* has also been furnished to the Secretaries of the several State and County Societies with which the Association has been in the habit of exchanging.

It is the opinion of your committee that the Association should return to the former method of publishing its Transactions. Respectfully submitted.

JAMES A. GRAY, Chairman,
W. D. BIZZELL.

Dr Goodrich, one of the committee, submitted the following minority report:

I do not agree with the majority, so far as their recommendation to return to publishing our Transactions in volume form, as I consider the present [in *Journal*] the proper one for the success of the Association. Respectfully submitted.

E. C. GOODRICH.

The Committee on the President's Address made the following report, which was received and adopted:

Mr. President and Members of the Medical Association of Georgia:

Your committee appointed to take under consideration the several propositions embodied in the President's Inaugural Address beg to report as follows:

First. As to the question of medical examiners, including the draft of the Act proposed to the State Medical Societies for adoption by the American Medical Association.

In regard to pages 33 to 45 of the President's Address your committee would recommend that it be read to the Association and referred to the Committee on Medical Legislation. If, after reading, the Association think it desirable, they can instruct the committee to urge its adoption or not, as they may see fit.

Representatives to and from other State Associations, pages 46 and 47, inclusive:

Your committee would recommend that such construction be put upon Sec. 3, Art. V., of the Constitution as to require the President to appoint a suitable number of fraternal delegates to the neighboring State Associations, or that notice be given that the Constitution will be amended at next annual meeting, so as specially to provide for the appointment of such delegates

The portion of the President's Address from page 48 to 51, *Professional Secrets*, page 48. Selling Poisonous Drugs under the form of Secret Remedies. Page 49. *Expert Testimony*. Pages 50 and 51:

Your committee would recommend that they be referred to the Committee on Medical Legislation, with the request that they endeavor specially to get some legislation upon preserving to the physician *Professional Secrets* and proper remuneration and recognition for *Expert Testimony*, especially some fixed and reasonable compensation for testimony before coroners' juries and *investigations de lunatico inquirendo*. This matter your committee considers of the highest importance.

As to the publication of the Transactions, pages 52 to 58, inclusive:

Your committee has no recommendation, but will leave the question with the Publishing Committee and this Association for solution.

As to the present status of the Association, your committee are compelled regretfully to agree with the President, that the Association, in point of numbers and influence, is not what it should be. Only about one in six of the physicians throughout the State are enrolled upon its membership. This state of affairs should be remedied if possible. Your committee are constrained to believe that at least a part of the trouble is due to the defect of the present organic law or Constitution under which the Association is now working. The chief defect lies in the fact that, as now constituted, the Association does not rouse or attract local interest, or specially foster and encourage the organization and maintenance of local or county societies, which are the natural schools of training for efficient workers in the State Association, and constitute a very strong link or band by which the local medical centers are united to the Association. Particularly is this true of the more remote counties away from the populous cities where this body is accustomed to meet. Under the present plan we are unable to reach a very large number of the rank and file of medical men. They do not understand fully our motives or the objects of the organization, or appreciate the advantages likely to accrue to them as individuals or to the profession

throughout the State from a thorough organization. In view of these facts, your committee would recommend that a committee of one from each Congressional district be appointed to take under advisement this whole question, and report at the next annual meeting of this body what changes, if any, are necessary in the Constitution to effect the advancement of this Association and enlarge its usefulness throughout the State.

It is understood that this shall constitute a formal notice of intent to modify the organic law or Constitution as provided for in Article 13 of the present Constitution.

By-law regulating the term of the President's term of office, pages 65-6-7-8.

The committee agree with the worthy President in the belief that the best interests of the Association will be subserved by so changing the By-laws as to have the President, Vice-President and Censors inaugurated and enter upon their duties immediately before the adjournment of that session during which they were elected to office. The President, however, will not be expected to deliver his inaugural till the opening of the subsequent session over which he is expected to preside.

As to Patents, Advertising, etc., your committee agree with the President in his views, and specially in the matter of giving certificates to nostrum vendors, such as cosmetics, washes, etc., etc. We think it beneath the dignity of the profession, and especially derogatory to its best and highest interests, and that the delegates from this body to the American Medical Association be instructed to move in the matter before that body.

Delay of Authors Furnishing Copy, page 64:

Your committee recommend that the provisions of amendment of the Constitution and By-laws be changed to four intead of two weeks, and hereafter be strictly enforced.

Presidential Prize Essay Fund, page 75 and following:

Your committee approve the suggestions therein contained.

As to the Plan of an International Degree, etc.:

Your committee consider this very desirable.

Respectfully submitted.

W. D. BIZZELL,
CHARLES H. HALL,
S. B. HAWKINS,
A. G. WHITEHEAD,
E. H. RICHARDSON,
C. L. SAMPLE.

The hour of eleven o'clock having arrived, the special order of the day, Dr. J. P. Logan's paper on "The relation of the medical profession to the uses and abuses of alcoholic liquors," was read.

The reading of this paper brought out considerable dis-

cussion, which was engaged in by Dr. Eugene Foster, of Augusta; Dr. V. H. Taliaferro, of Atlanta; Dr. H. F. Campbell, of Augusta; Dr. W. H. Doughty, of Augusta; Dr. W. A. Love, of Atlanta; Dr. W. D. Bizzell, of Atlanta, and Dr. T. S. Powell, of Atlanta.

Dr. Eugene Foster said: It is known that I am an ardent temperance man, but no one believes more in the proper use of alcoholics than I when necessary. This subject has become a species of fanaticism that ought to be brought to a halt. Therefore, I move that it be referred to a committee of one from each Congressional District, of our oldest and most learned members, to consider fully the question of the therapeutic value of the various preparations of alcoholic liquors and report to this Association.

Quite a number opposed the motion of Dr. Foster to refer to a committee.

Dr. Love opposed it. He said it ought not to come up at this time on account of the political movement in the State.

Dr. Love moved that Dr. Foster's motion be laid on the table.

Adopted.

Dr. Powell said: I am sure it will not be denied by any that Dr. Logan's is an able paper. I see no reason why it should not take the same direction as other papers.

Dr. Taliaferro, of Atlanta, said that alcoholic liquors were a necessity. If there is nothing in the use of it, it is high time we know it.

Dr. Nunn said: We want an original investigation.

Dr. Campbell made a most eloquent speech in favor of the use of alcoholic beverages in important cases. He said it would take a great deal to make him believe that alcohol was not good as a therapeutical agent for one about to perish.

The hour of twelve o'clock having arrived, the special order of the day, the orator's address, was called for.

The President introduced the orator, Dr. C. W. Hickman, of Augusta, who delivered a most entertaining address.

[This address was not furnished the Secretary.]

The President then announced the Nominating Committee as follows: Drs. R. H. Taylor, Spalding; S. C. Benedict, Clarke; R. B. Barron, Jones; J. F. Cole, Carroll; J. P. Gwyn, Oconee; W. P. Ponder, Monroe; J. W. Flanders, Johnson; A. G. Whitehead, Burke; J. D Wright, Jefferson; E. W. Lane, Emanuel; J. D. Herman, Dodge; G. W. Mulligan, Wilkes; M. H. O'Daniel, Baldwin; T. L. Lallerstedt, DeKalb; Eugene Foster, Richmond; W. Z. Holliday, Columbia; M. P. Deadwyler, Elbert; P. H. Thompson, Clay; K C. Divine, Fulton; Wm. F. Holt, Bibb; W. B. Standifer, Early; George C. Hummel, Chatham; M. G. Hatch, Washington, and E. H. Richardson, Polk.

The following communication was read by the Secretary, and, on motion, was referred to the Committee on Publication:

AUGUSTA, GA., April 20, 1886.

The Medical Association of Georgia, Augusta, Ga.:

GENTLEMEN—At the 13th annual meeting of the Georgia Pharmaceutical Association, held in Savannah on the 13th of this month, we were appointed a committee to present to your Association and respectfully urge our convictions of the harm which comes from the largely increased use of a certain class of remedies claimed as being non-patented, and many other kindred preparations, of which the markets are now so flooded. The harmful influence which comes to both professions from their use is evident.

It is harmful to the pharmacist, insomuch as it tends to lower the standard of the practice of pharmacy; depreciates the necessity of constant, active and vigorous study and practice so necessary in developing the talent required for intelligently prosecuting his profession; invites care'essness and indifference in the pharmacist, who will learn that a large part of the medicines dispensed by him can be bought ready-made; suggesting in these times of sharp competition

to an unscrupulous manufacturer the sacrifice of the purity and value of his preparation to the price for which it can be offered.

For the value of your remedial agents you are largely dependent on the pharmacist. Upon his judgment, his skill and competency in dispensing them you rely only on him. If this is so, how important becomes the necessity of fostering in your pharmacist the self-reliance he should feel.

It works harm to the pharmacist in a pecuniary way, for the inroads made by these manufacturers not only deprive us of the practice of our profession, but they take away the profit yielded through their manufacture which should be ours.

We respectfully suggest that it must become evident to you who give this matter your thought that for many of the reasons given, and others, it works harm to your profession.

The close relationship which can but exist between the physician and the pharmacist, acting in the legitimate capacity of his profession, is evident, and feeling this we respectfully submit this appeal for your consideration. With much respect,

S. C. DURRAN,
F. J. MOSES,
I. N. HORSEY,
Committee.

The next business was the selection of the place for the next annual meeting. Atlanta was unanimously selected.

By Dr. J. A. Beasly, of West Point:

Resolved, That the second day of the next and each subsequent session of this Association be set apart for omnibus discussion.

Adopted.

Dr. W. A. Love, as the fraternal delegate to the Alabama State Medical Society, made the following report, which, on motion, was ordered printed:

Mr. President:

I had the honor of receiving, at your instance, a commission from the outgoing President, Dr. Foster, accrediting me as a fraternal representative from this Association to the Medical Association of the State of Alabama.

In your communication of the 31st ult., notifying me of such an appointment, you requested that I "look thoroughly into the workings of the Alabama Association and be prepared to make a report to this Association at its present meeting, and that you would certainly call on me for the same. You further expressed an exceeding anxiety to have its methods understood by the Profession

of this State, as we might thus pave a way to a change in our present absurd system of regulating practice." In this your delegate most heartily concurs.

In filling your commission, I take pleasure in reporting that I attended the meeting of the Alabama Association, assembled in annual session at Anniston, from the 13th to the 16th inst. inclusive, presented my credentials and met a most cordial welcome as your representative. I gladly take this occasion to acknowledge personally to that body, and to the Committee of Arrangements of the Calhoun County Medical Society, my many obligations for the warm reception given me there.

In compliance with your request to look thoroughly into the workings of that Association, I regret that the limited time at my disposal has not allowed me to study more thoroughly its complex, yet perfectly working machinery. That the Profession of Alabama is thoroughly organized, and that its Association is in the most complete working order of any in the many States of this Union, I have not the least doubt. The degree of perfection it has attained is the result of years of work. In carrying on this work, the Association has had as its leader a man who has demonstrated the fact that he has few equals as an organizer, and most of the rules and regulations governing the body are the productions of his one brain. After years of effort he succeeded at the annual session at Huntsville, in 1872, in getting adopted the present Constitution of the Association. Your delegate had the honor of attending, as your representative, that meeting of the Association also. The Constitution was adopted to be in force for ten years to make a fair test as an experiment. From time to time amendments have been made as emergencies would arise, and rules adopted to meet the exigencies as they arose, but the body of the work was not interfered with, believing that in its complexity was its strength, and that it would require a decade to put it in good working order. The experiment was fairly made, and at the expiration of the prescribed time the results were so entirely satisfactory that all opposition had died out, and some who were most strenuously opposed to it in the outset had become its warmest supporters. In all this the same distinguished organizer has stood steadily at the helm steering its course, and with a vigilance and tact peculiarly his own, guarded against the breakers on the one side and on the other. While much is due to him as a leader, much is due also to a united Profession, whose leading minds have sustained him in his work--a work that has united more firmly the Profession of the State of Alabama. Under this Constitution the Association is not only unique but peculiar. Its membership consists in a College of Counselors and a body of Delegates. The College of Counselors consists of three classes or grades, and aggregates *one hundred*, nine of whom are elected annually. They rank as Junior Counselors, Senior Counselors and Grand Senior Counselors. A proposition is now pending to establish a rank of Emeritus Grand Senior Counselors, into which to retire those who have faithfully served the Association through the subordinate positions to the expiration of their full terms of service.

The body of Delegates consists of the regularly elected Delegates from the County Medical Societies—societies chartered by the Association under the State laws,

giving authority for the same. Each County Society is entitled to two delegates exclusive of counselors. These represent the organized Profession of the several counties of the State.

The officers of the Association consist of President, elected annually; two Vice-Presidents, elected for two years—one elected each year to fill the vacancy following a two-years' service of the senior; a Secretary and a Treasurer, each elected for a term of five years; a Board of Censors and Committee of Public Health. This consists of ten members, elected from the College of Grand Senior Counselors, for a term of ten years, two each year, thus giving a large majority of experienced members on this important board, aside from being selected from among the Grand Senior Counselors—men who have reached that rank by virtue of having served satisfactorily five years as Junior Counselors, then promoted to the rank of Senior Counselors, served ten years as Seniors, when they are further promoted to the rank of Grand Senior Counselors, from which the Board of Censors is elected as stated. This is an important board. It is composed of men true and tried—men of experience.

While the Association constitutes the Board of Health of the State under the enactments of its General Assembly, this Board of Censors constitutes the Executive Committee, or Acting Board *ad interim* for the Association in recess, the Senior Censor (chairman or president) being the Health Officer of the State.

This body, as Censors, has the supervision of the County Medical Societies, and the revision of their rolls; the supervision of the County Examining Boards and their examinations of applicants for license to practice medicine in the County or State. The examinations are conducted in writing and the several applicants from irregular Schools, as Eclectics, Homœopaths, etc., are examined on Anatomy, Physiology, Chemistry, the Mechanism of Labor, Hygiene and Medical Jurisprudence.

Students desiring to enter upon the study of medicine are examined as to their preliminary education, and, if not up to the standard, are not recommended. This, however, is only commendatory. Practitioners are examined on the several branches included in the curriculum of a college course, on hygiene and medical jurisprudence, to which every graduate and undergraduate is subjected before he can legally practice medicine in the State. To guard against the influence of bias or prejudice in these examinations, and as a protection to both the County Examining Board and the applicant, these examinations are conducted in writing and sent up for the inspection of the Board of Censors.

As Censors again, this Board has the further duty imposed upon it of examining the minutes of the Secretary and the Transactions of the Association, the revision of the Roll of the College of Counselors, the County Societies, books of the Examining Boards, and the Roll of the Dead, the auditing of the Treasurer's books and accounts, and the general supervision of the interests of the Profession throughout the State. They make their annual report to the Association which takes final action. As a Committee of Public Health, acting for the Association, they have the supervision of the Health Officers of the County Medical

Societies, and of the assistant health officers of the sub-districts or "beats" subordinate to the County Health Officer of each county. These health officers and their assistants are required to keep a directory of their districts, with the name, residence, and post-office address of every doctor and midwife in his district, and of those of adjoining districts, who enter his in their labors, and collect and report every birth and death, with the cause of death in the district, once every month, on proper blanks furnished for the purpose. Where no births or deaths have occurred, the same is to be reported.

Into the details and particulars it is not necessary to enter here. It is necessary to say only that, with hopeful and encouraging prospects of success, the Association, as a Board of Health, with the censors as an executive committee, the county Medical Societies and county Health Officers and their assistants in the counties and sub-districts as auxiliaries, have tackled this great work of gathering vital statistics for the State, at a mere nominal cost, under a new plan, which, as the health officer for the State (Dr. Jerome Cochran, Senior Censor) reports, is giving token of eminent success. Vital Statistics, unless correct and complete, are worse than useless. He reports the encouraging prospect of gathering them, under this plan, for the entire State, both correct and complete.

This Board has charge of the sanitary affairs of the State. It is their duty to gather information and report upon the prevalence of all endemic and epidemic diseases of the State and advise as to the best means of warding them off—of preventing their spread, and institute inquiries as to their cause, pathology and treatment. Further details as to the duties and workings of this Board are deemed unnecessary in this report.

The County Medical Societies are organized with a President, a Secretary, a President of the Board of Censors, and a County Health Officer. The membership consists of such regular graduates and licentiates, practicing under certificate of county boards, as may choose to enter, and are elected to membership in the society. They are required to send two delegates to the State Association, to keep a regular medical Directory, giving name in full, college and date of graduation, or date of certificate of authority under which they practice, with their post-office address, and send annually a corrected roll of their membership to the Association, accompanied with their dues. They are further required to report the work of their Censors, examinations of applicants for certificates, with examination and results as stated above; to report the death and cause and date of death, age, Alma Mater, etc., of their deceased members, to be entered on the Roll of the Dead. They are required to report removals of their members within or without the State. They are further required to give the name, Alma Mater, date of graduation and post-office address, of every regular practitioner, and of every irregular practitioner, of the county. Among these there remain a goodly number who are of the "*squatter sovereignty*" order, who remain and practice under the law by virtue of "having been there at the first," when the law was enacted, it being prospective. When time shall have vacated their places, the provisions

of the Association will have provided for these vacancies with a different class of practitioners.

The financial scheme of the Association is simple and effective in its working. The dues to the Association are annual, from each Delegate $5.00, Counselors Elect each $5.00, Counselors each $10.00, and for each member of the County Medical Societies exclusive of Counselors, $1.00. This aggregates a sum annually, sufficient to defray the working expense of the Association, and publish the annual volume of Transactions ranging from 500 to 650 or 700 pages, containing many valuable papers, a complete Directory of the Profession of the State, inclusive of members of the Association, members of the County Medical Societies, together with the regular and irregular practitioners of the several counties. The volume of Transactions is distributed to each member, delegate and Counselor, the value of which far exceeds the cost to the members of the several county societies.

Each annual session is opened with a message from the President covering such reviews and recommendations to the body as he may deem expedient or advisable. During the session an annual oration is delivered by some member selected for that purpose.

At each annual session certain subjects are selected and assigned for essays to be presented at the succeeding session. In this way valuable contributions are made to the medical literature of the State, and the symptoms, pathology and treatment of various types of disease in different sections are gathered and given to the Profession. For each session some prominent member is appointed to present subjects or questions of interest, to be published in advance, for the information of the members who may desire to enter into it, the propounder leading off in this "*Omnibus Discussion.*" In these daily discussions much of the varied opinions and experiences of the Profession is brought out, adding to the interest of the volume of Transactions. The reports of the Board of Censors, as Censors, and as a Board of Health, are always interesting, and give valuable information touching the workings of the Association and its subordinate societies, the prevalence of endemic and epidemic diseases, and the gathering of vital statistics for the State.

It will be seen by this imperfect outline sketch that the Medical Association of Alabama is a representative body, that its working is at once unique and complex, its very complexity giving it strength. It might seem that its complicated machinery would bring unbearable friction in its workings. Such, however, is not the case. It has united the Profession of the State as one man; its influence for good, good to the Profession and good to the people, is felt throughout its jurisdiction. Thus united and working in harmony, it is a power in the land. From irregulars and disappointed aspirants it has met opposition. These for a time played upon the prejudices, the credulity, and gullibility of the people, and brought what at times seemed to be formidable opposition to it, but its intelligent officers, its ever watchful and efficient Board of Censors, backed by its erudite and experienced College of Counselors, have so far guided it safely to a

condition of prosperity and power that would seem to vouchsafe a successful future. On its roll are inscribed the names of the leading Medical Lights of the State, and few men of any prominence are outside of its organization. They are united in peace, they are working in harmony, and their social and political standing and influence is such that it is a sufficient guarantee that in the future, as in the past, they will be amply sustained by the enactments of the General Assembly, in all their efforts for the common good of a confiding community.

And now, Mr. President, whilst I regret the crude, hasty and imperfect description here given of the organization and working order of our sister Association, to which I had the honor of being accredited, it has been a pleasure and a profit to me to witness its harmonious meetings, to see the Profession of a noble State striving in unison to elevate that Profession and aid that people in their efforts to attain health, happiness and longevity; to save them from the scourge of the hordes of squalling mountebanks, traveling quacks and quack nostrum vendors that have swarmed to curse our State, and cultivate the gullibility of our people from time immemorial. Alabama furnishes no foothold for such a class of impostors while they swarm and light like locusts in our midst.

The question naturally arises, why are these things so? Wherein is the difference? The solution is plain. It is given in the foregoing outline report. There the Profession is united; there they are organized; there they work in harmony for the good of the Profession and the protection of the people; there, by united and concerted action, they wield an influence that is felt, and felt effectually in the social, professional, and political circles of the State, and they are, by that united and concerted action, enabled to have enacted such laws as are deemed desirable and necessary to carry out their designs, elevate the Profession and protect the people.

Is there no remedy here for these evils? Will a mere handful of the Profession of this great State continue to assemble annually, as an Association, claiming to be the representatives of the Profession of the State; a Profession that has become the butt and jibe, not only of the Professional world, but of the Laity and even the quacks and mountebanks; a profession without influence, save the personal influence of its individual members? Will they thus continue from year to year without an effort to unite, to organize and increase their strength, power, and influence for their own elevation and protection? What has been done by one people can be accomplished by another! Results that have been attained in one State can at least be imitated in another!

We need united, concerted action; we need organization. This Association is no representative body; it is a mere *omnium gatherum*—every member representing himself. How, then, can we claim to be the representatives of the Profession of Georgia? Will it not be better then that we resolve ourselves into a sort of nucleus—just what, in fact, we are—and see what influences we can bring to bear in uniting the Profession throughout the State?

Our membership is scattered to the four corners. An effort on the part of each in organizing local societies might and would accomplish much. With the Pre-

fession united and their influence brought to bear in the right direction, an elevation might be hoped for.

Seeing and feeling these things, with the hope of accomplishing some good in that direction, the foregoing report on the working of our sister Association of Alabama is respectfully submitted.

WM. ABRAM LOVE, M. D.,
Special Delegate.

The Association adjourned to 3:30 o'clock p. m.

SECOND DAY—AFTERNOON SESSION.

The Association was called to order by the President at 3:30 o'clock.

The President then made the following appointments:

Orator for 1887, Dr. Wm. A. O'Daniel, of Laurens Hill.

Delegates to the American Medical Association for 1886:

Henry F. Campbell, J. P. Logan, W. F. Westmoreland, James A. Gray, G. W. Mulligan, E. C. Goodrich, A. W. Calhoun, T. F. Walker, J. F. Alexander, M. P. Deadwyler, W. F. Holt, C. H. Hall, S. B. Hawkins, V. H. Taliaferro, A. G. Whitehead, T. O. Powell, A. W. Griggs, R. H. Taylor, Robt. Battey, E. H. Richardson, S. C. Benedict, J. W. Bailey, W. B. Wells, E. W. Lane, R C. Ward, T. S. Powell, G. H. Noble, E. L Connally, J. McF. Gaston, Eugene Foster, George C. Hummel, W. S. Elkin, A. J. Logan.

On motion of Dr. James A. Gray, the President's name was added to the list.

Committee on Publication: Drs. James A. Gray, Jos P. Logan, H. V. M. Miller, E. C. Goodrich, Robert Battey, E. L. Connally.

The following report was read by the Treasurer and referred to the Auditing Committee:

AUGUSTA, GA., April 21, 1886.

To the Medical Association of Georgia:

GENTLEMEN—In making my report I desire to congratulate the Association upon the fact that we are out of debt for the first time for years, and have a small balance in the treasury.

There are on the list a number of members who owe for two and three years. I have endeavored earnestly to collect these back dues, and at times have been accused of "dunning" the members, but I have always tried to be simply *persistent*.

I shall drop these names from the roll after this meeting.

I beg the Association to pass a resolution to withhold the volume of Transactions (or the JOURNAL, if we continue to publish in that form) from those members who do not pay their dues in full, so that they shall not enjoy the same privileges of those who pay promptly.

RECEIPTS.		DISBURSEMENTS.	
Dr.		Amount paid Acting Treasurer Hull's expenses in Macon,	$ 12.00
Balance in Treasury as per last report,	$293.50	Expenses of Secretary in Savannah,	16.98
Am't collected during the year,	603.00	Expenses of Treasurer in Savannah,	16.40
	$896.50	Paid balance due on Transactions for 1884,	238.84
		Paid *Atlanta Medical and Surgical Journal*,	482.00
		Balance in treasury,	1.28
			$896.50

Respectfully submitted. E. C. GOODRICH.

Dr. Love made a lengthy report of Gynecology from the Fifth District.

The Auditing Committee made the following report, which was adopted:

We, the undersigned committee, appointed to examine and audit the Treasurer's books and vouchers, find them neatly and correctly kept.

We find the Secretary's books in a like manner.

We further find that the agreement made at last meeting for the publishing of the proceedings has been faithfully and efficiently complied with. We recommend a return to the system of publishing the proceedings in book-form.

Respectfully submitted.

A. G. WHITEHEAD,
W. F. HOLT,
R. H. TAYLOR.

Resolution by Dr Wm. F. Holt, of Macon:

Resolved, That all subsequent committees of arrangement be forbidden from providing a public banquet in connection with the annual meeting of this Association.

After much discussion this was laid on the table until after the Atlanta meeting.

Dr. Benedict, of Athens, read the following communications from Dr. John R. Quinan, of Baltimore, which were referred to the Committee on Publication:

APRIL 3, 1886.

Dr. Samuel Benedict:

DEAR DOCTOR—Mrs. Sarah Owen, a patient of mine of this city, gives me your address as one likely to take interest in the subject of this note. I believe the lady is a native of your State and an acquaintance of yours.

As President of the Medical Chirurgical Faculty of this State, I had occasion to examine its manuscript files for certain historical purposes, and met among the papers a letter from "Dr. John Walker, Corresponding Secretary Cent. Med. Soc. Geo., and dated from Madison, Georgia, June 10, 1829." It is a letter addressed, apparently of his own motion, to our Medical and Chirurgical Faculty, seeking to establish fraternal relations with us, and giving at the same time a sketch of the progress of the efforts in Georgia by legislation to benefit the profession and protect the community against quackery, and thinking it would be of interest to the profession of your State to possess the facts he states, I would have a copy of the letter made and sent to the Central Medical Society of Georgia, or its existing successor, if I knew where to send it.

Having your address through the kindness of Mrs. Owen, I take the liberty of calling your attention to it, with the hope that you can give me the needed information. I am with respect yours fraternally,

JOHN R. QUINAN.

BALTIMORE, MD., April 8, 1886.

Dr. Samuel C. Benedict:

MY DEAR DOCTOR—In accordance with your wish, I take pleasure in forwarding to you a copy of the letter of John Walker, "Corresponding Secretary of the Central Medical Society of Georgia," and addressed to the "Corresponding Secretary of the Baltimore Medical Society," 1829.

I find also among our manuscript files a resolution offered by the late Dr. Henry Willis Baxley, and unanimously adopted, requiring our Corresponding Secretary (at that date, Dr. B. A. White) to express "to the Georgia Medical Society the deep interest we feel in the result of their laudable efforts, and that we cordially reciprocate the friendly feelings of the Society, etc., or which, I pre-

sume, may yet be found among the minutes of the Georgia Society if its proceedings have been preserved.

In thus recalling the friendly relations of the profession in your State and ours, I cannot forego the opportunity to convey through you my assurance to your *confreres* that time has not cooled the deep and warm sympathy on our part in the success of every one and everything connected with the professional welfare of our brethren of Georgia, and that we are at all times ready to renew the fraternal greeting of 1829. With much respect, your obedient servant,

JOHN R. QUINAN, M. D.,
Pres. Med. and Chir. Fac. Md.

MADISON, GA., 10 June, 1829.

DEAR SIR—Although there has been but little done until lately to elevate the character and respectability of the medical profession in Georgia, it is now to be hoped that a new era is about to dawn upon it, and that the time is not far distant when our State will take a distingnished and dignified stand among the most enlightened States in the Union in the cultivation and improvement of the medical sciences.

It is true we have had, and have at present, many enlightened and respectable physicians amongst us, but previously to the year 1825, no law existed to restrain illiterate and illegitimate practitioners from settling in the State and imposing their services on the credulity of the community.

In December, 1825, our Legislature wisely sanctioned the establishment of a medical board, and enacted a law that no person should thereafter attempt to practice medicine, or any of the collateral branches, for fee or reward in the State, under a penalty of a sum not exceeding five hundred dollars and two months' imprisonment, without first taking out a license from the board of physicians. This license can only be granted to such persons as present diplomas to the board from respectable medical colleges; or in the event of their not having graduated at some medical school, subjecting themselves to an examination.

The first meeting of the Board of Physicians took place at the seat of government (Milledgeville) on the first Monday in December, 1826, on which day of the said month they are to continue to meet annually. A Central State Medical Society was at that time organized, and permanent members were elected in addition to the members of the Board of Physicians, which consisted of twenty respectable medical practitioners from various parts of the State.

But little business of importance was transacted at the first meeting of the Society in December, 1827. A Constitution and By-laws were formed, officers elected, and a committee appointed to prepare a Code of Medical Ethics, and recommend it for the government of the profession throughout the State. The report of this committee was made at our last annual meeting, in December, was amended, adopted and ordered for publication (*vide* the January number of the *Medical Recorder* for 1829.) An oration was delivered at our last meeting, which embraced a condensed view of the history of medicine in the Southern and

Western States, commencing with Virginia and ending with Tennessee and Kentucky.

A few papers were also read before the Society, none of which presented much novelty, except an essay on the Non-existence of Malaria as a Cause of Intermittent and Remittent Bilious Fever.

As your Society is much older than ours, and contains a greater number of highly talented and distinguished members, it would afford us much pleasure to cherish and keep up a correspondence with yours. This might not only be a mutual advantage to both societies, but also have a tendency to subserve the cause of medical science and literature in general. It would therefore yield me much pleasure to submit any communication with which you may favor me to our Society at its next annual meeting in December.

I am, etc., with much regard,

Your most obedient servant,

JOHN WALKER,

Cor. Sec'y Cent. Med. Soc. Ga.

On motion, Dr. H. McHatton, of Macon, read the paper on Malarial Hæmoglobinuria, reported by title yesterday. It was discussed by Drs. Ford, Love, Hitt, Flanders, Whitehead, Sample, Baxley, Lane, Beasly, Lamb and others.

Dr. DeSaussure Ford said:

I have listened with interest to Dr. McHatton's valuable paper. It is a little surprising that there is such a paucity of literature upon it in our State. The doctor has cleverly described its pathology, and I will not take up the time to say anything more, but discuss only the cause, etiology and treatment. The name, Malarial Hæmaturia, indicates the cause, then, if malaria is the cause, and if we possess a supposed antidote for malaria, rationally that antidote should be used to combat the trouble.

Unquestionably the disease is peculiar to malarial districts, where other forms of malarial diseases prevail, and like the simple malarial intermittents and remittents, first attacks predispose to recurring attacks, and like the milder form (if any malarial disease can be so considered) may be developed

into most malignant forms of the disease. This should prove the affection of malarial origin.

Sternberg, in his able treatise on "Malaria and Malarial Diseases," teaches that "hemorrhagic malarial fever" has four clinical varieties :

1. Intermittent.
2. Remittent.
3. Pseudo—continued.
4. Siderante.

And tabulates from Firaud's study thus:

FORM.	No. Cases.	No. Deaths.	Relative Frequency. Per Cent.	Actual Mortality Per Cent.
1 Intermittent. .	124	... .	46.4	....
2 Remittent.....	64	13	23.5	22.7
3 Pseudo-continued	59	32	22.0	54 0
4 Siderante.	21	21	7.9	100.0
Total cases	268	66	... .	24.6

And furnishes another table:

AUTHOR.	TREATMENT.	Cases.	Deaths.	Ratio Pr. Ct
Firaud	Quinine in very small doses; calomel purge	71	22	31.0
"	Quinine in moderate doses; calomel in smaller doses	69	13	17 4
"	Quinine in very small doses; calomel and other purgatives as basis of treatment	83	26	31.3
"	Quinine in large doses	73	5	6.8
Webb	Quinine in full doses.....	23	2	8.6
McDaniel ..	Quinine administered (no particulars as to amount).....	85	35	41.0
"	Without quinine	93	16	18.0

And Sternberg's comment on the above is this: "It is evident that the statistical evidence is decidedly in favor of quinine, if we exclude Dr. McDaniel's series of 85 cases, treated with quinine, in which the mortality was forty-one per cent." "Certainly we cannot accept this series as evidence that the administration of quinine increases the mortality in the face of the very favorable results reported by Firaud and by Dr. Webb, unless we have fuller details as to the doses in which it was given and the other measures of treatment adopted."

With such carefully collected statistics, I am therefore inclined conscientiously to treat hemorrhagic malarial fever with large doses of quinine, and my limited contact with the disease has sustained my positive opinion that quinine is the proper treatment, and in my lectures to the students of the Medical College of Georgia, I have unhesitatingly deprecated the use of calomel, and especially guarded them in regard to the diagnosis, and taught, as Sternberg has written, that in the intermittent variety the prognosis is favorable, and that to prevent a recurrence of attacks, which may assume the graver forms, the subject must avoid the locality, or if compelled to remain must take daily moderate doses of quinine as prophylaxis.

The study of Sternberg's book will be profitable to the younger members of our Association, and even to the older ones, whose opinions have not been fixed by a long experience in the conduct of malarial diseases.

I will not detain the members further than to suggest that nausea (a prominent symptom) often prevents the administration of medicine by the mouth. If it cannot be restrained by emetics of warm water, which I consider most valuable, then of course the rectum may be used, or hypodermic and

endermic methods adopted for the administration of quinine, nourishment and stimulants.

Dr. J. W. Flanders, of Wrightsville, said:

I had an opportunity recently of treating a very severe case, which caused me a great deal of anxiety, the patient being my son. He had been suffering from malarial fever of an intermittent type at intervals for six or eight weeks previous to being attacked with hemorrhagic fever. He came home from school on the evening of the attack complaining of feeling unwell and retired early. About 11 o'clock he awoke me by making a noise like one struggling for breath. I went to his room and found him in an unconscious condition. After several efforts to wake him, he jumped out of bed and ran around the room several times with his hand on his stomach, at the same time crying with pain. Supposing that he had spasmodic colic, I gave him a dose of chloroform, which he immediately vomited, and went back to bed apparently relieved of pain. He went to sleep, as I supposed, and remained quiet until day-break, at which time I entered his room, and finding him as yellow as an orange, I called to him and he jumped from the bed and called for the chamber mug, and passed fully a gallon of bloody urine. He also vomited blood very freely, and had hemorrhage from the gums and conjunctiva. As soon as I succeeded in arresting the vomiting, which I did by a blister to the epigastrium, I put him in a warm mustard bath and gave him small and repeated doses of calomel and large doses of quinine, occasionally repeating the mustard bath and allowing him to drink the juice of sour oranges, which he asked for. In thirty-six hours convalescence was established, and his recovery was rapid and soon complete.

Dr. Theodore Lamb said:

There are but two practical points to be considered in the treatment:

1st. The conditions of the gastro-intestinal tract are not such as to warrant giving quinine by the mouth. It should be given hypodermically. Any doctor can make his own solution by slowly adding tartaric acid q. s. to dissolve the quin. sulph. in warm water, or using quin. bisulph. in warm water 1–11.

2nd. I would draw attention to the important observation of Feraud as to the much better prognosis when the type is intermittent.

Dr. E. W. Lane said:

The paper of Doctor McHatton is one of very great interest to me, and the discussion has been able and decidedly instructive. It has never been my unhappy lot to meet with many cases of that disease in my practice, though it does prevail to some extent lately. At our meeting in Savannah last year, an able and learned member gave us a talk, and told us that mercury was his remedy, and when it was pushed to ptyalism that the rule was that his patients got well. Since then I have had three cases of it to contend with, and I pursued his plan of treatment, and just as I got them well under the influence of mercury they died; my cases were of a very severe form, and probably would have died under any other known plan of treatment.

Dr. Hitt said:

That he would be glad to have the views of Dr. Love as being the first physician in the State to come in contact with the disease.

Dr. Love said:

I have occupied so much of the time of this Association to-day, making my reports and otherwise, that I did not for

this reason expect to participate in the pending discussion; but inasmuch as my friend, Dr. Hitt, has designated me so pointedly, I trust I will be excused the further trespass on your time while I offer in an off-hand sort of way an answer to his question, and give the results of my observations and experience with the disease under discussion.

I believe I had the misfortune to be the first to greet the disease in Lee county—a new disease to us there—a disease seemingly sudden in its incursion and rapid in its run to a fatal termination—a disease afterwards designated as "*Lee County Fever.*" Its present nomenclature was suggested by Dr. Richard Michel, and adopted by the Medical Association of Alabama, at its annual session in Montgomery, 1870; the speaker remembers being present at the time. The first few cases were *pernicious*, *malignant*, and proved rapidly fatal, some in a few hours, others in a few, and a very few days. All the cases coming under my observation then, that season and thereafter, were evidently of malarial origin, and the result of the injudicious treatment of malarial fevers of well known types. The cases occurred almost invariably in individuals who had suffered with chill and fever, chills and fevers brought under control by the free use or rather *abuse of quinine*, and I think the best lesson the profession can teach the people is that *a doctor cannot be made at one sitting.* The laity seem to think this can be done and act accordingly, take their cases in their own hands, leading them to the very brink, if not over the precipice, before professional aid is appealed to. The doctor is called just in time to order blisters and coffins in the same breath! *Chill and fever* is *the disease* of the country, but the profession are seldom consulted as to that. The quinine bottle sits on the mantel hard by the clock, a member of the household comes in with a chill,

quotidian, tertian, double tertian or quartan, the hour is noted, and without correcting the secretions or other preparation of the system, the known antidotal effects of quinine is resorted to, the next chill warded off under its stimulating or its sedative effects, as you please to consider it, until the end of a week, or two weeks, or some hebdomidal period, these periods generally shortening, when another chill and another course of quinine is resorted to, and this is the routine treatment practiced throughout the season and throughout the country.

It is well known to the profession that every chill is a congestion—that normal functional action in the entire organism is interfered with by hyperæmia on the one hand and anæmia on the other. The result of these conditions is disintegration, which should be followed by proper elimination of the dead or disintegrated elements—the correcting of the secretions, as it is often expressed. No such course is pursued. Quinine tends to force the system to adapt itself to this condition and to control the disturbances in the physiological diurnal changes in the organism. Under such a course the system becomes surcharged with the effete products of malarial poison—the living fluids become contaminated like Dead Sea water, the nerve system becomes seriously impressed, functional action in the perypheral end organs as well as in the great centres—especially the ganglionic centres—becomes so disturbed that you have not only daily paroxysms of chill and fever, but a regular *double quotidian* type. I have again and again seen two regular well-marked chills followed by fever within the twenty-four hours. During this time it is that the disease presents its chameleon-like character, the color of the skin changing in an incredibly short space of time to the golden hue of jaundice, the

deeper color of russet, or the dark mahogany shade of hemlock leather.

I have seen presented no solution of this sudden pathological change. I have at times thought that some physiological or histological facts might throw some light upon the subject. It has been demonstrated by experimental research in investigations into the minute anatomy of the liver that *water, injected into the hepatic ducts and forced through the biliary capillaries*, around the liver cells, would *return by the lymphatics*, just as water forced through the portal vein or hepatic artery would pass out of the liver by the hepatic vein, and *vice versa*, water forced *into the lymphatics passes out through the hepatic capillaries and biliary ducts.* Now it has been further demonstrated by *post mortem* investigations that *in hemorrhagic malarial fevers we have duodenitis.* That the inflammatory action in the mucous membrane of the duodenum—an inflammation of low grade—extends itself by continuity of tissue into the lining membrane of the ductus communis, the cystic duct, the lining of the gall-bladder, and the biliary ducts, so far into the substance of the liver as their columna epithelia extends. This congested, inflamed and swollen condition of the lining membrane of the biliary ducts, as a matter of course, diminishes or obliterates the calibre of these ducts. This diminution or obliteration, as an equal matter of course, offers in the ratio of its extent an obstruction to the passage of bile in the natural direction to the duodenum and to the gall-bladder. If its passage is obstructed or arrested in this way by a swollen lining membrane and its secretion by the liver-cells is continued, it is reasonable, natural to suppose, that it would take the same course that the water injected into the biliary ducts would take under pressure of the injecting ap-

paratus—that is, out of the liver through the lymphatic ducts. These lead through the mesentery ultimately to the thoracic duct, *the bile under this reflux reaching the thoracic duct rather than the duodenum.* There it mixes with the chyle from the lacteals, with the lymph from the lymphatic system, by which it is diluted and with which, by the biliverdine, the mass is colored. Thus mixed, modified and colored, it is poured into the left subclavian vein. Its course is thence that of the blood in its circulation—to the right heart, to the lungs, to the left heart and through the aorta to the systemic circulation. When this tide of blood, with its liquor sanguinis, colored by the biliverdine and other coloring matters of the bile, reaches the capillaries of the systemic circulation, then and there comes the change, sudden as the swell and change in the limpid stream when the murky storm-waters are poured into its bosom. I cannot in any other way explain the sudden chameleon-like changes so characteristic of the disease. I conceive that the suddenness of the change and the depth of color are due to the rapidity of the reflux flow and the quantity of bile thus diverted from its legitimate channel. More than this, in the ratio of the rapidity of its diversion and the quantity of bile so diverted is the severity of the impress upon the vital centres and the fatality of the disease.

With the microscope and chemical reagents at hand, I have watched hourly these changes day and night, examined every secretion and excretion, together with the blood taken from the living and from the dead, with the hope of reaching some correct conclusion as to the true pathology of the disease.

The urine passed before the chill, *quotidian or double quotidian,* presents nothing more than we find in ordinary cases of malarial fever, urine highly charged with biliary

matter as shown by heat and the mineral acids. That eliminated during the chill shows a change, giving a mixture of urine with the more watery portions of the liquor sanguinis, more or less cere-albumen, colored with cruorin or hæmatine, blood corpuscles, some seemingly normal, others enlarged, whilst others still present a crenated appearance—vibriones innumerable float in the fluid.

As the case progresses to a fatal termination, the kidney secretion or excretion is entirely suspended. Not only is this secretion arrested, but every secretion of the body is held more or less in abeyance, terminating in absolute suspension before the final dissolution.

I will not dwell upon symptoms—the two leading pathognomic symptoms alluded to just now—the chameleon changes in the color of the skin, in which all the fluid and semi-solid tissues of the body partake, and the "bloody urine," are sufficiently characteristic of the disease These, together with many other symptoms, I can explain in no other way than with the views I have given briefly of what seems to me the correct pathology of the disease.

In a discussion like this I could not trespass on the time of the Association to go into further particulars. These views are based solely upon my own experience and observations made at the bedside.

In studying and battling with the disease, I have had an intimate personal experience, for I had it myself, aside from several cases in my own immediate family. This one contest with it, in my own person and home-circle, satisfied me, and I left a people I loved, and whose hospitality is not surpassed anywhere, for a home among strangers in a region where the disease has never yet occurred, except sporadically, and was of exotic origin, so to speak.

Since leaving that section, while following the history of

the disease there and elsewhere, and examining closely into the various theories as to its pathology, I have not, so far, had occasion to change the theories and conclusions reached then and there. I have given them for what they are worth. Further investigation by those in the proper field for the same will prove the correctness or incorrectness of the theory, and I will be pleased to know the result of the research.

As to the treatment, Mr. President, I do not know that I can add much to the discussion that would be worth the time. Like those of my brother practitioner in front of me (Dr. Lane), my first patients died promptly. They, like his, were pernicious, malignant cases, and gave me little time for either investigation or treatment, so rapidly did they pass through the chameleon shades to the shadows beyond. The cases that followed, that season, were less malignant, and I watched and studied them closely with the satisfaction of seeing them recover. I soon became satisfied, from my own cases and those occurring in the hands of my brother practitioners, that the disease was a sort of sequel to chill and fever badly treated—that is, treated by quinine alone—keeping off the chills by the free and repeated use of quinine without properly preparing the system for it—without correcting the secretions—without preceding it with cholagogues, and I used my utmost endeavors to impress upon the minds of my patrons the danger of such a course. This, I think now, is the true policy to be pursued by the practitioner and by the people, but the people will not heed.

In the heroic treatment, with herculean doses of calomel or quinine, alluded to by some in this discussion, I have no experience. The course pursued by me was based upon the theory of the disease I have just given, and was more of an expectant plan, the *elimination of the dead, disintegrated ele-*

ments from the system by every means possible. I found benefit from the course just alluded to by my friend, Dr. DeSaussure Ford, the free use of water internally and externally, the *San Grada* plan of "*glysters and hot water*," water by the stomach, water by the rectum, and used freely, hot or cold, or in alternation by the stomach, ice when it could be procured, to help control the nausea and vomiting, given pounded or in pellets. I have given calomel in broken doses, combined with digitalin and hyosciamin, followed by sulphite of magnesia (sulph. of magnesia with hyposulphite of soda), an antiseptic and mild cathartic that may be given freely little by little in solution. Have given quinine freely, preferably in pill form, made up with glycerine, ten to twelve parts, carbolic acid one part; one drop of this will make four grains of quinine into a consistent pill of ordinary size. On being taken into the stomach, the affinity of the glycerine for the fluids of the stomach, parts it at once and the quinine and minimum dose of carbolic acid is rapidly diffused through the stomach, and I have thought that the acid aided in controlling the nausea and vomiting—alkaline baths and sponging with the mineral acids properly diluted and with saline solutions—aided much in eliminating dead elements from the system, and it was upon this elimination in every way that the success of treatment depended.

I found quinine accomplished most given between the hours of one and ten o'clock in the forenoon, and so gave it irrespective of the fever paroxysms or thermal heat.

The Nominating Committee submitted the following report, which was unanimously adopted:

President—T. O. Powell, Milledgeville.
First Vice-President—G. W. Mulligan, Washington.
Second Vice-President—E. H. Richardson, Cedartown.
Censor, long term—S. B. Hawkins, of Americus.

Censor, unexpired term of Dr. Richardson—Robert Battey, Rome.

(For remainder of report see pages 5, 6 and 7.—Sec.)

By Wm. Abram Love—To provide for a Medical Directory of the State and for the organization of the profession by counties:

Resolved, That a committee of three be appointed to collect and compile a Medical Directory, to be arranged alphabetically by counties, giving the name, post-office, college of graduation, date of same, or date of certificate or license to practice, and to arrange the same as regular or irregular practitioners, and that said committee report progress at the next annual meeting.

Resolved, That this committee shall be made a standing committee, and be known as a Registration Committee, and shall from year to year correct, so far as possible, the directory herein contemplated.

Resolved, That the said committee open a correspondence with some of the leading physicians of the several counties of this State, urging upon them the advantages of thorough organization of the profession of the several counties respectively into county societies as auxiliaries to this Association in comtemplation of a re-organization of the Association as a representative body.

Adopted.

The President appointed on the committee Drs. William Abram Love, W. R. Bizzell and A. W. Griggs.

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THIRD DAY—MORNING SESSION.

The Association was called to order promptly at 10:30 o'clock by the President.

The reading of the minutes of the previous day was dispensed with.

On motion, the Secretary was authorized to furnish to the press the President's address if desired.

The Secretary read an announcement of a sanitarium by Dr. J. Emmet Blackshear, of Macon, which was ordered placed before the Board of Censors.

By Dr. Eugene Foster:

Resolved, That the By-laws be so changed as to read, the President may appoint as many on Committee of Arrangements as he chooses.

Adopted.

Dr. Theo. Lamb read a paper on "The importance of the early recognition and treatment of pleuritic effusion—the dangers of delay and routine methods," which was discussed by Drs Harrison and McHatton.

Dr. Calhoun, of Atlanta, reported and gave a synopsis of a paper on "The other side of Cocaine—the bad side."

Dr. Taliaferro, of Atlanta, reported and gave a synopsis of a paper on "Tampons to the Cavity of the Uterus, etc." It was discussed by Drs. Nunn and Campbell.

Dr. E. W. Lane, of Scarboro, read report on Gynecology, from the First District.

By Dr. James A. Gray, of Atlanta:

Resolved, That a special committee of three be appointed from this Association to meet a like committee from the Georgia Pharmaceutical Association to consider the paper submitted by that body through Mr. S. C. Durban, of Augusta, with instructions to report at the next meeting of this Association.

Adopted.

The President appointed Drs. James A. Gray, Eugene Foster and George C. Hummel on that committee.

Dr. E. H. Richardson, of Cedartown, offered the following resolutions, which were adopted:

Resolved, That the Medical Association of Georgia express their high appreciation of and return their heartfelt and profound thanks to the medical profession, citizens and municipal authorities of the city of Augusta for the princely and royal treatment received from their hands during the 37th annual session of the Association in her midst.

Resolved, That we also return our sincere thanks to the Augusta press and railroads that have extended valuable courtesies to our body.

The President appointed Drs. J. F. Alexander, James B. Baird, J. S. Todd, A. W. Calhoun, E. L. Connally, James

A. Gray, W. P. Nicolson, W. S. Elkin, V. O. Hardon, J. C. Olmsted, Committee of Arrangements.

At this point Dr. Nunn called to the stand Dr. Henry F. Campbell, Dr. DeSaussure Ford, Dr. Eugene Foster and Dr. A. W. Calhoun, ex-Presidents of the Association, and Dr. Thos. O. Powell, of Milledgeville, the President-elect, and before introducing him said that these gentlemen on the stage had signified their endorsement of the Prize Essay Fund by contributing one hundred dollars to that fund, and that Dr. Powell had already contributed the same amount, which now makes the Prize Essay Fund seven hundred dollars. He then thanked the Association for their assistance and attention during their deliberations, and in a few well-selected words introduced Dr. Thos. O Powell, of Milledgeville. Dr. Powell thanked the convention for the high compliment paid and took his seat.

The President appointed Dr. Wm. Abram Love, fraternal delegate to the Alabama State Medical Association, and Dr. T. S. Powell, to the Medical Society of Virginia.

By Dr. James A. Gray:

Resolved, That this Association do now adjourn to meet on the third Wednesday in April, 1887, in the city of Atlanta.

Adopted.

The Association then adjourned.

JAMES A. GRAY, M. D.,
Secretary.

APPENDIX.

PRESIDENT'S ADDRESS.

A NATIONAL AND INTERNATIONAL MEDICAL DEGREE.

ANNUAL ADDRESS DELIVERED BEFORE THE MEDICAL ASSOCIATION OF GEORGIA, AT AUGUSTA, 21ST APRIL, 1886.

BY R. J. NUNN, M. D., PRESIDENT, SAVANNAH, GA.

It is self-evident that in this world the most precious possession of a human being is life. By Him who spake as "never man spake," the yielding up of life for an object was considered the greatest sacrifice which the most fervent love could suggest. "Greater love hath no man than this, that a man lay down his life for his friends;" but the prolongation of life, and certainly its pleasures, are dependent upon a condition of health, and hence to the individual the value of health is second only to that of life itself; indeed, few of us there are who have not had positive evidence that in many instances life without health becomes an intolerable burden.

As communities are but the multiplication of the individual, the conclusion is unavoidable that the prosperity, nay, the very existence of a nation is dependent upon the life and health of its people.

It follows, then, that the highest duty of a government is

to protect and care for the life and health of those it controls.

Far more important than tariffs or currency is the life of the people. No questions of party ascendency can compare in importance with those affecting the health of the masses. Hygiene and sanitation must ever occupy the first place in the minds of wise, prudent and far-seeing legislators. Add but one day to the life of each individual of the population of the United States and the gain to the country at large would be 136,986 years—equal to the lives of 3,913 men averaging 35 years each. Assuming the average value of a day's labor to be $1.00, this would amount to $50,000,000 as the actual money value of one day lost to the productive industry of the country; add now to this the cost of the care of the sick at a hospital rate of $1.00, and we have $100,000,000 as the actual money value of a day of national health; but when these days come to be multiplied into years, the sum becomes too vast to be within the grasp of the comprehension of an ordinary mind, yet this boon is within the reach of a nation which pays proper attention to hygiene.

It is probable that in this country human labor is more valuable than in any other, and hence here, if anywhere, if we had wise and provident rulers, would this branch, at least, of medical education be pushed to its highest level.

It is evident that the class of men who devote special attention to the means of preventing and curing disease, and of prolonging the term of human life, becomes a most important factor in the national existence, and the proper education of the individuals for the profession they have adopted, would receive most careful consideration, and would be an object of constant solicitude on the part of a wise and conscientious government. It speaks not well for legis-

latures when these matters have to be forced upon their attention by the physicians themselves.

Older by far than our language is the proverb, "*salus populi suprema est lex*," but our legislators seem to have forgotten it in this our day.

Granting these propositions to be true, we would expect to find older, wiser, better educated and more thoughtful communities dissatisfied with the amount of technical education which is quite satisfactory to younger, less experienced, less cultivated and less thoughtful nations. Among the former we would naturally look for laws tending to prevent the influx of physicians whose educational acquirements do not come up to the standard the government requires; and so we find in different nations laws regulating the practice of medicine graded in stringency according to the ideas of the rulers. Looking at home, for instance, we see that twenty-nine States have passed laws of this character, in five of which diplomas are not recognized as evidence of competency, and all persons, whether graduates or not, are subject to an examination. These five are Alabama, Arkansas, Mississippi, North Carolina and Virginia. In the other twenty-four States diplomas are recognized as an evidence of fitness to practice medicine. These are Arizona, California, Colorado, Delaware, Florida, Illinois, Kentucky, Louisiana, Michigan, Minnesota, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, Ohio, Pennsylvania, South Carolina, Texas, Vermont, West Virginia and Wyoming. Georgia has been forgotten in the above list, and for her we grieve to acknowledge that from having once had at least the semblance of an examining and licensing board, and ranking with the advanced five, she has, within the last few years, by the Act of her legislature, taken

place in the ranks of the four-and-twenty blackbird supporters of the "free for all" race in medicine

The issuing of diplomas by medical examining boards, and the requiring of them by governments as guarantees of medical education, are evidences that the public is not capable of judging of the competency of physicians to practice their profession.

It is unfortunately too true that in every country in the world, perhaps without exception, there exists one or more colleges or licensing bodies ready to grant diplomas to persons notoriously incompetent, rather than lose the fee accruing to them for the diplomas, or else, owing to the peculiarities of their organization, the questions asked are so much a matter of routine that they become well known to parties who make a business of preparing candidates for licenses, and as a consequence the persons passing the most successful examinations are not unfrequently wholly incompetent to practice their profession.

It is a fact deeply to be regretted that business success in the medical profession most frequently attends those least educated; fortuitous circumstances, family connections, social surroundings, political influences and other favoring fatalities often bring extensive and yet unmerited practices; but when to these is added the usual capital of the charlatan, unblushing audacity, endless pomposity, self-assumacy and vanity, with bland and insinuating manners, success is almost certain.

Two things, then, should be demanded by the public, or by the government for them: 1st. That physicians should be thoroughly educated up to the highest standard attainable at the time of examination. 2nd. That the mode of examination and the constitution of the examining board

shall be such that a diploma issuing from it will be absolutely positive evidence of the ability of holder to practice medicine in accordance with the latest teachings of the profession.

Medicine may be said to occupy a position on the borderland between the sciences and the arts.

It is evident that certain results can never be deduced from factors constantly changing without rule. In medicine there exists not a single element which is subject to any known law, which is certain or controllable; patients differ in all the essentials of life; idiosyncrasies are co-numerous with the individuals; diseases, although known by the same name, never run exactly the same course; the domestic relations are different for each patient; the hygienic surroundings are not identical; the climate varies; nothing can be more uncertain than the psychological influences surrounding individuals and exerting upon them powerful influences for evil or for good; the food is different; medicines vary in strength and in therapeutic effect, and so with the action of every element which comes within the province of the physician; hence there can be no certainty in medicine; no result can be foretold; nothing but careful watching and the ability to detect slight changes, and to meet them, will lead to success.

As a consequence the claim that medicine is an exact science is utterly untenable. There is no sure deduction to be made from any one symptom; there is no certain result to be foretold for any remedy. The more accurate the observer and the wider his therapeutic experience the better the physician Theory in medicine is the parent of quackery; the quack has always ready a plausible reason for everything that happens and for everything he does; it requires a large experience to elevate a physician to the

plane where he can as a reply to a question say, "I do not know." It requires years of disappointments, theories upon theories, acquired and rejected, to arrive at the inevitable conclusion that medicine is organized empiricism, the experience of the past arranged and tabulated for our guidance in the future, that as a rule the closer we keep to facts and the further we keep from theory the better physicians we are.*

From this rapid review of the factors with which a physician has to deal, it will be evident that his education should be of a special character, consisting not alone of such reading and technical knowledge as is usually required, but in addition a system of training in the use and application of his faculties to that rapid, accurate and minute observation which can only be acquired by years of tutelage under experienced observers.

The physician must be trained to accept as a guide or suggestion whatever appears reasonable, but to believe nothing until he has applied to it the test of practice; he must formulate no creed upon the experience of others, but must be unto himself a law; he must distrust books and believe only what he sees.

It has become a habit—indeed, it is quite the mode now—to undervalue the medical educational requirements of American colleges, to decry the educational facilities of our home institutions and exalt those of Europe. Never was there a greater mistake. The best place to study medicine is where the physician will practice, among the types of disease he will be called upon to treat.

For the man of brains the educational facilities of America are quite equal to any in the world, and are better suited

*See Code of Ethics of Am. Med. Asso., On duties of Physicians in regard to consultations—paragraph 1.

to persons whose professional life is to be spent here. Original thinkers are just as numerous in America as elsewhere; vigor of thought is more usual here than on the other side of the Atlantic. Originality of conception is to the manor born. Brilliancy and dash in execution are the birthright of America.

Here we are not trammeled by the effete traditions of a by-gone age. We think and act independently.

Coolness and self-reliance are among the most valuable qualities of a practitioner, and should be assiduously cultivated. They are peculiarly characteristic of the American physician, and are the natural outcome of the isolated position occupied by such a large number of country practitioners, who in emergencies are required to render all sorts of professional service without the possibility of a consultation, and often without ordinary appliances being accessible; hence one of the best positions for a young man who has obtained his "license to study" is that of a "country doctor." A few years spent in country practice will teach him to respect his hard-working country brother, and will also teach him to depend upon his own resources, will make him wonderfully independent of professional aid, and will educate him up to the point where he can meet grave responsibilities alone and unaided.

These are some of the characteristics of our people, and these can best be cultivated at home.

Few of our young men are experts in foreign languages, so that much of the time spent on the continent is taken up in acquiring the language of the country; it follows that during that time little or nothing can be done at medicine. For social reasons, as a good send-off in business, it is all very well, but for a medical education I believe that

for Americans as good can be had in America as in any country in the world.

The home of McDowell, and Sims, and Mott, and Gross, and Flint, and of our own Long, and a host of others equally honorable, is certainly no bad school; the birthland of anesthesia, of ovariotomy, and we may say of gynecology, cannot be wanting in originality.

In the case of a physician of some years' practice, where there is experience enough to appreciate the individualities, the peculiarities of each school, when the mind is capable of making useful comparisons of the various methods met with, then indeed a few months or years passed in such observations might and would be exceedingly useful.

If we look around us and carefully examine the conditions of various communities, we cannot fail to be struck with the fact that where the people are the most ignorant, where human life is of the least value, there will medical education be at a low ebb; and as a country rises in the social scale, or if those controlling the legislation of the country advance in learning and refinement, so will a high order of medical education come to be required. This is especially remarkable on the continent of Europe, among those governments whose national existence depends upon the number of their soldiers, and where of necessity the life and health of the man is of great importance to the community.

Would we see how a scientific, a high order of education is appreciated by our people, look at the millions spent by the governments of Europe to support universities, and compare this expenditure with the few dollars grudgingly appropriated here. See how scientific investigation is stimulated, fostered and rewarded by the rulers there and how they are neglected here. There learned men are honored.

and position and emoluments are open to them; here the scholar may beg his bread, while the lowest grade of a petty pot-house politician is petted and pampered and paid.

When scholarship and learning are esteemed so little, we need not wonder that we are no better than we are, but rather that we are as good as we are.

It is quite true that formerly the claims of physicians to an equal share of the honors conferred upon other learned professions were not tangibly acknowledged in some European countries, but of late years a change has taken place in this particular, and we find the medical profession gradually attaining to a position where its just claims will be acknowledged.

England has had to contend with a state of things very similar to that which at present exists in America; but there some years ago a *general medical council* was formed to take charge of the matter of examination, and an official directory is annually published of persons authorized to practice. It must not be imagined that the course of this council has been smooth, or that the standard of education is fixed. On the contrary, there has been much opposition to its plans, and from unexpected sources, viz., from the colleges themselves. The interests of some of them were jeopardized and their authority would be curtailed, their freedom of action limited, and they opposed the change. Much, it is true, has been done, but much more remains to be accomplished.

America, with a civilization of a couple of hundred years, has been often taunted by Europeans with practically selling medical diplomas; but let me tell you and remind our accusers that in their own communities, under their own governments, hoary with the experience of a thousand years, a half century has not elapsed since diplomas were pur-

chasable from colleges and universities of standing—nay, if I recollect correctly, were publicly advertised by agents. It is little more than a quarter of a century since fellowships of royal colleges were offered for sale to members of a certain number of years of membership; and even within the last decade dental diplomas were offered for sale by circular. Indeed, a few years ago, and perhaps at this very moment, there may be practicing in England men whose sole qualification is that of being ancient practitioners.

When we take into consideration the disparity in years, we have no reason to shrink from a comparison, but we may rather be proud of the position we have attained in medical education.

In a business point of view, the mere possession of a better medical education will not be likely to insure to the possessor a success superior to that accorded to the veriest professional mountebank, unless there is at hand some mode of presenting the fact to the public; and to attain this end no other means suggests itself than the establishment of a degree, the requirements of which shall equal the highest demands of modern civilization, and surrounded by such safeguards as to be unattainable by the uneducated, even though backed by money, by social position and political influence.

Seemingly these results are attainable through two channels only: 1st. Professional influence directly and indirectly exercised; 2d. Legislative enactments.

The medical educational institutions and the licensing powers of this country are virtually in the hands of the profession, but, alas! medical sectarianism has so divided our ranks that little good can be expected from this source; still it is not impossible that a degree could be established by agreement between associations and a system of representa-

tion by which, upon receiving a diploma, the holder would acquire the right to practice in the States represented. Such a system, however, would be neither as simple, as economical nor as authoritative as a national and an international medical degree.

Experience has shown that there is little prospect of obtaining in the near future from State Legislatures any general legislation regulating medical education which will be of any practical value.

While much has been done, and more probably will be done in some States, there are others in which there is little hope that any advance will be made for years to come, and even if the laws required were enacted they would be, through the apathy of officials, of no avail in many States, as they are practically ignored in some where they already exist, and where it has been found difficult, if not impossible, to obtain a verdict under the existing laws, or a verdict being obtained to enforce the penalty.

The legislators represent the people, and interested parties, actuated by selfish motives, have led the more ignorant, and hence the more easily deceived, classes into the error of believing that this would be class legislation for the benefit of the doctors and to the detriment of the people.

Great conflicting interests will be opposed to the regulation of medical education by State laws; "the homœopathists, the physio-medical, the hygeio-therapeutic and the mixed schools included in the enumeration of the legally acknowledged institutions in the United States in the Report on Medical Education of the Illinois State Board of Health for 1885," will resist it; then the eclectics will oppose it. "The Eclectic Medical Society of the State of New York has declared formally against all attempts at placing legal restrictions on the practice of medicine, and the President

of the Eclectic Medical Association of Pennsylvania declared in his annual address that the principles of eclecticism are based mainly on the 'American principle of freedom.' . . Their creed is, let any one practice who wishes to do so; let him get his diploma as he wishes, and let him help his practice with as much advertising as he desires." Med. Rec., Nov. 14, 1885, p. 546-7.

With such principles it is evident that the eclectics can be largely recruited from the illiterate classes, and will exert among them a great influence, and as these constitute the great bulk of the voters to whom the successful politician must cater, it follows that bills regulating technical medical education must be a dead letter until this eclecticism becomes a thing of the past.

The homœopaths of the N. Y. County Homœopathic Medical Society have also reported against the bills for the appointment of a State Board of Examiners for the purpose of licensing physicians. Med. Rec., Feb. 20, 1886, p. 215.

'The peculiarities of our political system are also a serious difficulty to be encountered. The morals of party organization are too well known to be trusted for a moment, in my estimation, to make a wise selection of health officers for the public or to guard the entrance to the practice of medicine. . . . The boards are painfully incompetent, and as the position is a political one can never be better under the present form of government."—Coll. & Clin. Rec., Vol. vi., No. 12, p. 232.

As an improvement upon the present system, or rather want of system, of granting medical licenses, it is probable that the great majority of thoughtful physicians will favor examining boards, the members of which shall be unconnected with educational institutions; it would be wise, however, to act cautiously in the matter of unreservedly endors-

ing the establishment of an independent State Examining Board in each State, to examine the ultimate results which would come from such a system, and determine whether a better system cannot be proposed to correct the evils undeniably existing at present and those likely to result from the general adoption of State Licensing Boards by the several States. To this end we must briefly discuss the relations of medicine, as a science and as a profession, to the human race.

It is generally conceded that man, wherever found, wherever studied, is practically the same in his anatomical and physiological peculiarities, or at least that, medically considered, one race of men differs no more from another race than one individual of the same race may differ from another. Theologically man is one and medically man is one.

From this it follows that the field of practice in which the sacerdotal functions can be exercised is world-wide, and so should be the sphere of the medical practitioner. A physician competent to practice in England should be free to practice in France, in Germany, America, or any place else. The human economy is the same, and the principles which guide the practitioner are the same everywhere. There certainly is no just reason why the competency of a physician to practice his profession should be determined by geographical lines. Dr. Marion Sims was quite as skillful a physician in Paris as he was in New York; and so Dr. Keith is just as good a surgeon in Edinburgh as he would be in Alabama, and the State Board could not make him any better. If Dr. Gross, or Dr. Mott, or Dr. Flint could reappear and locate in Alabama, Arkansas, Mississippi, North Carolina or Virginia, their own pupils, men who inhaled their first medical breath standing at their knees, would sit in judg-

ment upon their fitness to be numbered among the physicians of their States.

This is manifestly absurd, and the only excuse which can be offered for such a condition of things is a distrust of tests of competency applied in other States or countries, or a disbelief in the honesty of the examiners. While the national vanity of some European countries may lead them to form such a conclusion, there is one, at least, in which one of the pleas urged for the exclusion of foreign physicians was that these latter would obtain the fees from their countrymen, who were there as tourists, which would otherwise be paid to the native practitioners.

A medical diploma is valuable—1st. As an evidence of education. In this particular its value is in proportion to the severity of the published programme of examination and the reputation of the examining board for integrity. 2nd. In proportion to the extent and business value of the territory in which it constitutes a license to practice.

An English diploma would be comparatively valueless if Scotland, and Ireland, and Wales, and the Isle of Man, and each of England's thousand colonies, had an independent examining board. If each of the petty principalities constituting the German Empire had an independent Examining and Licensing Board, then would a German diploma be worthless.

To me it seems that no system of medical educational legislation can be complete that does not keep in view the great principle of *the universality of medicine.*

If every State is to exclude the licentiates of every other State, our national associations of general practitioners, or of specialists, are mere shams—each member practically working to make the world believe that he is better than the rest of his fellow-members. If our medical education is only

local, then is an International Medical Congress a delusion. We cannot meet as equals when each at home lords it over all the others, and merely tolerates an association with those whom under other circumstances he seeks to subject to a professional ostracism. Let us, then, be consistent; let us, instead of wrapping around us an impenetrable mantle of self-conceit, rather endeavor so to frame our action that, while protecting the community from ignorance and charlatanry, we may raise the grade of medical education to a uniform standard the world over, so that the evidences of a qualification having been once obtained, the holder will be free to travel and practice where he pleases. Nothing short of this would be just to the members of the profession. In populous communities the modern mode is to divide the practice of medicine in specialties. The most expert and celebrated specialist might make but a poor showing in an examination as a general practitioner; and, *per contra*, the general practitioner of many years' practice and great practical experience might easily be shown to be but badly posted upon many of the minutiæ of the specialties. In medicine, as elsewhere, the great man is he who "knows everything of something and something of everything;" while the theory upon which we are now acting is that at all times of his life a man knows everything of everything.

Even with the receptive powers at their best, as it is among our young men, it has been found impossible to grasp the whole range of medical education at once, and hence has arisen the system of graded examinations, in which but one or two subjects are taken up at a time; yet we would require of the old an aptitude and a receptive and retentive power which has been found to be an impossibility in the young. What has proven to be unattainable with the elastic brain of the youth is made a prerequisite with the harden-

ing brain cells of the adult. Evidently, then, if State Examining Boards are to be the rule, the examinations of the older practitioners who might apply should be confined to those practical subjects which arise in daily practice; but even here the specialist would loom up as an unconquerable difficulty. Possibly in the outset of his career he may have served a long apprenticeship as a general practitioner; but that may have been many years ago, and in all these years, while practicing as a successful specialist, he may not have attended a case of sickness outside his specialty. It is far from probable that many English physicians of the old school could pass a successful examination on surgery. I refer to physicians of the time when, if it was necessary to bleed a patient, a surgeon was called in to perform the operation. As it is, the specialist does not pretend to expertness outside his specialty. It is evident that the establishment of State Examining Boards will tend certainly to develop a condition of professional sciolism.

The establishment of an independent State Examining Board in each State will ultimately be equivalent to the enactment of a professional passport system—the substitution of a modern professional "jail bounds" for the old and obsolete "debtor's jail bounds"—which, if it is not contrary to the law, is certainly antagonistic to the sentiment of the people of the United States.

Clearly, then, unless medical men are satisfied to endure a life-sentence of professional imprisonment within the limits each of his own State, and if at the same time State Examining Boards are regarded as a necessity, there is but one way out of the dilemma, viz., by the institution of a system of interstate representation upon State Examining Boards, and the establishment of an interstate degree, by agreement between the States; but the true remedy is in the founding of a

national degree by the government of the United States; and it is to be hoped that in the near future Congress will find it within its power to authorize the formation of an Examining Board for the United States. This it could easily do, as such a body could be made almost if not entirely self-supporting, or it could be constructed from physicians already in the service of the government, and would thus entail no additional expense upon the people. Naturally this would fall within the scope of the National Board of Health, and this additional duty, if faithfully, fairly and fearlessly executed, would make this body a national blessing, even if no other result should ever accrue from its labors. Upon the examining board could well be placed representatives of the army, of the navy and of the marine hospital service, and graduates could then be made eligible for a certain number of years to positions in either of these services, first in the order of merit, and in case of equal merit, then in the order of seniority; and it is not impossible that other privileges might be granted which would increase the value of this degree to the holder.

With the composition of the examining board, however, we have really nothing to do. All we desire is the establishment of a degree requiring the best possible medical education, and the institution of a board of examiners, the veracity of whose certificate cannot be called into question.

By suitable representations our representatives in Washington might be induced to give this matter proper shape and bring it before the Senate and Congress of the United States.

Constitutional lawyers have expressed to me the opinion that this action would come well within the clause of the Constitution, giving to Congress the power to "provide for the common defense and the general welfare," and as it would

not involve any ultimate outlay, it would not be likely to meet any opposition from the "watch-dogs of the treasury."

To insure a high order of education, it might be well to make provisions: 1st. That the grade of examination or qualification required should never be less than the highest established by any country in the world. 2nd. That a grade of examination once established should never be lowered, or a branch of study once added should never be dropped; but as only very extraordinary minds could pass upon such a variety of subjects at one time, graded examinations might be allowed at reasonable intervals.

By the operation of such a law the grade of American medical education would be constantly advancing, could never be lowered, would soon be the standard for other nations to equal, and what is better than all, the evidence of qualification would be unimpeachable, in this country at least.

The natural outcome of the discoveries of the present century of steamboats, railroads, telegraphs and telephones is the unification of the human race in language, manners and customs, and with the increasing rapidity and facility of travel, the time is rapidly approaching when the convenience of the communities and the interest of humanity will imperatively demand the formation of an International Medical Union between the civilized nations of the world, and the establishment by all the governments interested of an International Medical Degree, carrying with it the right to practice in all the countries represented in the Union; to this the establishment of an American National Degree is but a preliminary and necessary step. The details of such an institution would simply be a matter of agreement between governments, presenting very much less difficulties

than the postal union or the extradition treaty, while conferring advantages quite as great.

Of course there would be in each country a system of examining boards, upon which would be representatives of each of the signatory nations, whose powers would necessarily be defined by the treaty.

Not the least of the advantages of the institution of such a degree is that it leaves the educational machinery at present existing in each country absolutely undisturbed; it does not enter into competition with the teachers; it does not abridge the power or privileges or corporate rights of any legally authorized licensing body now in existence, but leaves them all untrammeled in their present sphere of action; calling for a higher and more extended education, it would increase the work for the teachers; in fact, it would enter upon an entirely new and untouched field of operation, and should command the support of every branch of the profession—student, practitioner, teacher and examiner.

The very constitution of such boards of examiners would place them beyond the possibility of having their judgment warped by improper influences, pecuniary, social or political, while the possibility of the examinations assuming a routine form would be guarded against by the frequent changes which would of necessity occur in the *personnel* of the boards, or else the questions presented by the representatives could originate at the seats of government of each of the signatory powers, each propounding a certain number of questions upon each subject.

The furtherance of this object might well occupy a share of the attention of our National and State Medical Associations, now disturbed and distracted by valueless questions of ethics, which, when settled, no matter how, will be of no earthly importance, and will not advance the cause of medi-

cal science in the least. No more important subject could be brought before the International Medical Congress than the establishment of an International Degree, nor could a greater boon be conferred upon the profession of the world than the institution of such a qualification; in fact, it is the natural outcome of such a congress; it is a legitimate object of discussion in that body, and such a result would be to it an everlasting monument of its wisdom and desire for professional advancement of which it might well be proud, and for which future generations would "lift up their hands and call it blessed;" or again, the Society of the Red Cross, which, from the very nature of the work in which it is engaged, and from the wide sphere of its operations, would be interested in this matter, might be induced to turn its attention and use its influence in this direction, to the furtherance of this object.

The closer and more intimate the relations between nations, the less likelihood will there be of war; the more numerous the threads which hold communities together, the less will be the probability of rupture. The establishment of an International Medical Degree will be one more link in the chain of civilization which binds nationalities, increasing the intimacy of their relations to each other, and putting farther and farther away the probabilities of war, or if war does come, tending to alleviate many of its horrors. It would be a freemasonry of science. Represented in this light, the effort to establish an International Medical Degree would doubtless be actively and warmly seconded by the members of the Peace Congress Viewing the matter in its various aspects, it seems not improbable that the effort to found such a degree would find a cordial and numerous support throughout the world.

To the individual physician the possession of such a de-

gree would be of inestimable value, and it would unquestionably be ardently sought after. It would confer upon the holder a freedom of action which he could acquire in no other way, and would indelibly stamp his educational qualification as equal to any in the world; it would give to the youngest practitioner the highest standing possible to attain, and make him instantly, by force of his own genius, a world-wide authority in medical matters.

To communities such a degree would scarcely be less valuable than to the graduate. It would enable invalids who so desired to bring to their assistance medical men from any quarter; and in times of epidemic or war, medical aid could be summoned, if needed, which, under the State law or national system, would be illegal, although doubtless under such circumstances it would be tolerated.

With the institution of an International Medical Degree we would see a mighty scientific brotherhood start into existence in which truly the principles of liberty, equality and fraternity could be legitimately carried out; a great republic of science would be born into the world, covering a territory co-extensive with civilization. A power for good would leap forth, before which the mightiest of kingdoms or governments would dwindle into insignificance.

Cannot the Medical Association of Georgia initiate a movement which may ultimate in so great a result? Can we not secure for our grand old State the credit and the immortal glory of sowing the seed which will bring forth fruit of untold blessings to humanity? Gentlemen, members of the Medical Association of Georgia, it is given to you to say whether this shall or shall not be.

Your attention has been directed in this channel from a desire to do away with these purely local ideas which confine our educational schemes to the narrow limits of a State

or a country, from a desire to broaden our philanthropy until it embraces the whole profession of the world, from a desire to elevate our estimate of medicine until we can look upon the profession as a unit, whether in Russia or in the United States, whether in Canada or Australia.

It is not to be denied that this proposition savors of Utopia, but it is no more ideal than the postal union, no more impracticable than extradition or any other international treaty.

May we, before we return our trust to the Great Giver, be able to look upon one medical profession wide-spread as civilization, whose members will not be limited in the exercise of their functions by any geographical or governmental boundaries. May we live to see the day when suffering humanity can summon to its assistance skilled physicians of any nationality who will be free to exercise their profession untrammeled by local laws, begotten of a narrow, contracted, erroneous interpretation of the duties and requirements of the medical profession. When that day arrives a new era will dawn upon medicine; then will the profession assume an importance now not dreamed of; then will it become a power of enormous social influence; its now heterogeneous elements will then be aglutinated into one harmonious whole, working together for their common good, and for the welfare and advancement of civilization and of humanity.

Gentlemen, members of the Medical Association of Georgia, the duty assigned to me by your Constitution has been performed. The problem which was suggested at the beginning of this address is solved, and in an International Medical Degree we have a qualification far removed from the influences of illiteracy and ignorance, and unattainable by the charlatan and the quack. We have the means of insur-

ing to communities physicians possessing the highest attainable degree of medical knowledge and expertness, and we have the power of giving to persons having the requisite qualifications such evidences of the fact as shall pass unquestioned and unquestionable over the world.

MATTERS OF SPECIAL INTEREST TO THE ASSOCIATION AND TO THE GENERAL PROFESSION OF THE STATE.

GENTLEMEN—I desire particularly to direct your attention to matters which concern the prosperity of the Medical Association of Georgia and the well-being of the profession in this State, to the end that such action may be taken as in your wisdom you shall determine may be best calculated to insure the welfare of both.

LARGE MORTALITY AMONG THE MEMBERS.

I would particularly direct attention to the extraordinary death-rate reported for the last year—no less than 11 out of a membership of 264, equal to 42 per cent. or 42 to the 1,000. The Committee on Necrology might with advantage investigate this subject.

THE LAW REGULATING THE PRACTICE OF MEDICINE.

This feature of our medical system invites your serious consideration. The law is as follows:

SEC. 1409. (a) *Who may Practice Medicine.* No person shall practice medicine within this State unless he has been heretofore legally authorized so to do, or shall be hereafter authorized so to do, by a diploma from an incorporated medical college, medical school or university and by compliance with subsequent sections of this chapter.

SEC. 1409. (b) "*Practice Medicine*" *Defined* for the purposes of this Chapter. The words, "practice of medicine," shall mean to suggest, recommend, prescribe or direct for the use of any person any drug, medicine, appliance, apparatus or other agency, whether material or not material, for the cure, relief or palliation of any ailment or disease of the mind or body, or for the cure or relief of any

wound, fracture, or other bodily injury, or any deformity, after having received, or with the intent of receiving therefor, either directly or indirectly, any bonus, gift or compensation.

SEC. 1409. (c) *Practitioners must Register.* Every person now lawfully engaged in the practice of medicine within this State shall, on or before the first day of December, 1881, and every person hereafter duly qualified to practice medicine shall, before commencing the practice, register in the office of the clerk of the Superior Court of the county where he resides and is practicing or intends to commence the practice of medicine, in a book to be kept for that purpose by said clerk, his name, residence and place of birth, together with his authority for practicing medicine, as prescribed in this chapter. The person so registering shall subscribe, or verify by oath or affirmation, before a person duly qualified to administer oaths, under the laws of this State, an affidavit containing such facts, and whether such authority is by diploma or license, and the date of same, and by whom granted, which shall be exhibited to the county clerk before the applicant shall be allowed to register, and which if willfully false shall subject the affiant to conviction and punishment for false swearing. The county clerk to receive a fee of fifty cents for each registration, to be paid by the person so registering.

SEC. 1409 (d) *Must Register Again on Removal.* Any registered physician in this State, who may change his residence from one county into another county in this State, shall register within the clerk's office of the county to which he removes, and wherein he intends to reside and to practice medicine, as provided in the preceding section.

SEC. 1409. (e) *Penalty for Illegal Practice.* Any person who violates any of the four preceding sections, or who shall practice or offer to practice medicine without lawful authority, or under cover of a diploma or license illegally obtained, shall be deemed guilty of a misdemeanor, and on conviction shall be punished by a fine of not less than one hundred dollars or more than five hundred dollars, or by imprisonment for not less than thirty or more than ninety days, or both. The fine when collected shall be paid, the one-half to the person, persons or corporation making the complaint, the other half to the county treasurer.

SEC. 1409. (f) *Medical Officers Excepted.* Nothing in this chapter shall apply to the commissioned medical officers of the United States, army or navy, or to the United States marine hospital service, or to legally qualified dentists in the practice of their profession, or to any woman practicing only midwifery.

SEC. 1409. (g) *All Medical Boards Abolished.* All provisions of laws providing for the organization, qualification and duties of any and all boards of physicians of any school whatever are repealed. And there shall henceforth exist in this State no board of physicians, but the only requisite qualifications of practitioners of medicine shall be those hereinbefore set forth.

[The Code of the State of Georgia, 1882.]

I procured copies of the registration lists from some of the principal cities in Georgia. The aggregate number of names

registered amounted to 433, purporting to be issued by 168 licensing powers of different names, although in many of them the same body is certainly referred to under varying titles.

The licensing bodies are distributed through twenty-six States and countries as follows: Alabama, Austria, Belgium, Canada, D. C., England, Georgia, Germany, Illinois, Iowa, Kentucky, Louisiana, Michigan, Massachusetts, Missouri, Maryland, New Hampshire, New York, Ohio, Pennsylvania, Prussia, South Carolina, Scotland, Syria, Tennessee, Virginia. And besides there are a number whose location could not possibly be determined.

The following can hardly be considered as coming up to the very slender requirements, even of a Georgia law, regulating the practice of medicine:

(1) From Dr. Samuel Thompson, (2) Royal College of Dental Surgery, (3) Baltimore College of Dental Surgery, (4) Licentiate, (5) Charleston, (6) Philadelphia, (7) Atlanta, Georgia, (8) Licensed by Act of General Assembly. I also find one person whose sole registered authority to practice is an "*ad eundum*" degree, but what the original "*gradum*" was is not stated.

None of these comply with the law, which uses the word medical before the words college or school.

In the following list the law is to all appearances complied with, in that the name apparently of an incorporated Medical College, Medical School or University, is given with one exception. Under which of these heads a State Board comes I cannot say. It will be observed that no state or city is mentioned by which the least clue to the location of these bodies could be obtained. Some of them we may know, or think we recognize, but that is not the question now. My

object is to point out some of the radical defects in the law as it exists.

Here is the list:

(1) American College Medical and Surgeons, (2) College American Medical and Surgery, (3) Hygiene Therapeutic College, (4) American Reform School, (5) Jefferson College, (6) Jefferson Medical College, (7) Howard University, (8) Southern Botanic Medical College, (9) Southern Eclectic Medical College, (10) Southern Medical College, (11) State Board Eclectic Physicians.

In the next class I will take up a series of names, in each of which the name of a city appears, to show the difficulty of identification when the name of the State is omitted:

***Atlanta*—(1) Southern Medical College of Atlanta, (2) Atlanta Eclectic Medical College, (3) Atlanta Medical College.**

There are thirteen Atlantas—Arkansas, California, Georgia, Idaho, Illinois, Kansas, Louisiana, Michigan, Mississippi, Missouri, Nebraska, Ohio, Texas.

***Augusta*—Medical College, Augusta.**

There are twenty Augustas—Arkansas, Dakota, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Michigan, Minnesota, Mississippi, Missouri, Montana, New Jersey, New York, Ohio, Texas, Virginia, Wisconsin.

***Baltimore*—College Physicians and Surgeons, Baltimore.**

There are three Baltimores—Dakota, Maryland, Ohio.

***Boston*—Bellview Medical College, Boston.**

There are twelve Bostons—Arkansas, Georgia, Indiana, Kentucky, Massachusetts, Missouri, New York, Ohio, Pennsylvania, Tennessee, Texas, Virginia.

***Charleston*—Charleston Medical College.**

There are sixteen Charlestons—Arizona, Arkansas, Illinois, Iowa, Maine, Michigan, Mississippi, Missouri, New York, North Carolina, Pennsylvania, South Carolina, Tennessee, Texas, Utah, West Virginia.

***Chicago*—Medical College, Chicago.**

There are six Chicagos—Illinois, Kansas, Kentucky, Nebraska, New York, Ohio.

Cincinnati—Medical Department of the Cincinnati College.

There are eight Cincinnatis—Arkansas, Illinois, Indiana, Iowa, Missouri, Nebraska, Ohio, Texas.

Edinburg—University of Edinburg.

There are nine Edinburgs—Dakota, Illinois, Indiana, Mississippi, Missouri, New Jersey, New York, Ohio, Pennsylvania.

Louisville—(1) Louisville Medical College, (2) Louisville College of Medicine.

There are fourteen Louisvilles—Alabama, Colorado, Georgia, Illinois, Kansas, Kentucky, Maryland, Mississippi, Missouri, Nebraska, New York, Ohio, Tennessee, Wisconsin.

Macon—(1) Botanic Medical College, Macon; (2) College of American Medicine and Surgery, Macon; (3) Reform Medical College, Macon; (4) Southern Botanic Medical College, Macon.

There was once, I believe, one medical college in Macon, Ga., but which one of these names refers to it I certainly cannot say, but to find out the location of the other three colleges will be a matter of some difficulty, for there are ten (10) Macons in as many different States, viz.: Arkansas, Florida, Georgia, Illinois, Michigan, Mississippi, Nebraska, North Carolina, Tennessee, Virginia. To which of these does the name in the affidavit apply?

Nashville—Nashville Medical College.

There are thirteen Nashvilles—Arkansas, California, Dakota, Georgia, Illinois, Indiana, Iowa, Michigan, Missouri, New York, North Carolina, Ohio, Tennessee.

New Orleans—New Orleans School of Medicine.

This one is not difficult to locate—there is but one New Orleans.

Philadelphia—University of Medicine and Surgery, Philadelphia; University of Philadelphia; Medical College, Philadelphia; Philadelphia Medical College.

There are eight Philadelphias—Illinois, Indiana, Mississippi, Missouri, New York, Pennsylvania, South Carolina, Tennessee.

Savannah—Savannah Medical College, Medical College of Savannah, Oglethorpe College of Savannah.

There are nine Savannahs—California, Georgia, Iowa, Missouri, New York, North Carolina, Ohio, Tennessee, Virginia.

St. Louis—American Medical College, St. Louis; Jefferson Medical College, St. Louis.

There are six St. Louis'—Arkansas, California, Indiana, Michigan, Missouri, Montana.

The following is a list of colleges registered, classified by States or countries. It will be observed that in many instances there is no guide, so that the classification is only a geographical surmise at best. Some, which could not by any possibility be located, have been already mentioned.

Alabama—Alabama Medical College.

Austria—(1) University of Vienna, Austria; (2) University of Austria.

Belgium—(1) University of Brussels.

Canada—(1) College of Physicians and Surgeons, Ontario, Canada; (2) Victoria University, Upper Canada

District of Columbia—(1) Columbia Medical College, D. C.; (2) Georgetown College, D C.; (3) Howard University.

England—(1) Royal College of Physicians, London.

Georgia—(1) Atlanta, Ga., (2) Atlanta Medical College, (3) Southern Medical College of Atlanta, (4) Atlanta Eclectic Medical College; (5) Medical College, Augusta; (6) Medical College, Augusta, Ga.; (7) University of Georgia, Augusta; (8) Georgia Medical College, Augusta; (9) Medical College of Georgia, Augusta, Georgia; (10) Botanic Medical College, Macon; (11) College of American Medicine and Surgery, Macon; (12) Reform Medical College, Macon; (13) Reform Medical College, Macon, Georgia; (14) Southern Botanic Medical College, Macon; (15) Medical College, Savannah; (16) Oglethorpe College, Savannah; (17) Oglethorpe Medical College, Savannah; (18) Savannah Medical College; (19) Board of Examiners of Georgia, (20) Board of Physicians of Georgia, (21) Botanic Medical Board of Georgia, (22) Georgia Eclectic Board, (23) Georgia Eclectic Medical College, (24) Georgia Medical Board, (25) Georgia Medical College, (26) Medical College of Georgia, (27) Medical Department University of Georgia, (28) Reform Medical College of Georgia, (29) Southern Medical College of Georgia.

Germany—(1) Jenna Medical College, Germany; (2) Medical College at Giessen, (3) Strassburg University (Ger.), (4) University of Liepsic.

Illinois—1) Bennett Medical College, Chicago; (2) Russ Medical College, Chicago; (3) Rush, of Chicago.

Iowa—(1) College of Physicians and Surgeons, Keokuk, Iowa.

Kentucky—(1) Hospital Medical College, Louisville, Ky.; (2) Kentucky School of Medicine, Louisville; (3) University of Louisville, Ky.; (4) Hospital College of Medicine, Louisville; (5) Kentucky School of Medicine; (6) Medical Department Central University, Kentucky; (7) Transylvania Medical College, Ky.; (8) University of Kentucky.

Louisiana—(1) New Orleans School of Medicine, (2) New Orleans School of Medicine, La.; (3) University of Louisiana.

Maryland—(1) Baltimore College of Dental Surgery; (3) College of Physicians and Surgeons, Baltimore, Md.; (4) Medical Department University, Md.; (5) University of Maryland; (6) University of Maryland, Baltimore; (7) Washington University, Baltimore.

Massachusetts—Worcester Medical College, Mass.

Michigan—(1) College of Medicine and Surgery, Ann Arbor, Michigan; (2) University of Michigan.

Missouri—(1) Hahnemann Medical College, St. Louis.

New Hampshire—(1) New Hampshire Medical College.

New York—(1) Bellevue Medical College, New York; (2) Bellevue, New York; (3) College of Physicians and Surgeons, New York city; (4) Eclectic Medical College, New York; (5) Homœopathic Medical College, New York; (6) Long Island College and Hospital, New York; (7) Medical Department University of New York; (8) Metropolitan College, New York; (9) New York Homœopathic College; (10) New York Hygiene Therapeutic College; (11) Physicians and Surgeons, New York; (12) University, city of New York; (13) University of New York; (14) Bellevue Hospital Medical College.

Ohio—(1) Cleveland Homœopathic College, Ohio; (2) Eclectic College, Cincinnati, Ohio; (3) Eclectic Medical College, Cincinnati, Ohio; (4) Homœopathic College, Cleveland, Ohio; (5) Miami Medical College, Cincinnati, Ohio; (6) Ohio Medical College, Cleveland; (7) Starling Medical College, Columbus, Ohio; (8) Cincinnati Eclectic Medical College; (9) Medical Department Cincinnati College; (10) American Eclectic College of Ohio; (11) American Health College, Ohio; (12) The Physic Eclectic College of Ohio.

Pennsylvania—(1) Jefferson Medical College of Philadelphia, Penn.; (2) Hahnemann Medical College of Philadelphia, Penn.; (3) Homœopathic Medical College of Pennsylvania (of Philadelphia); 4) Medical Department of the University of Pennsylvania, Philadelphia; (5) University of Pennsylvania, of Philadelphia; (6) American University, Philadelphia; (7) Eclectic Medical College, Philadelphia; (8) Hahnemann Medical College, Philadelphia; (9) Jefferson Medical College, Philadelphia; (10) Eclectic Medical College of Pennsylvania; (11) Jefferson Medical College, Pennsylvania; (12) Medical Department Pennsylvania College; (13) Medical College, Pennsylvania; (14) Pennsylvania Eclectic Medical College;

(15) Pennsylvania Electropathic Institute; (16) Pennsylvania Medical College; (17) University of Pennsylvania; (18) Woman's Medical College of Pennsylvania, Philadelphia.

Prussia—(1) Royal University, Berlin.

South Carolina—(1) South Carolina Medical College, of Charleston, South Carolina; (2) Charleston, (3) Medical College of South Carolina, (4) South Carolina Medical College.

Scotland—(1) University of Glasgow, Scotland.

Syria—(1) The Syria Protestant Medical College at Brent.

Tennessee—(1) College of Central Tennessee, Nashville; (2) Medical College, Nashville, Tennessee; (3) Nashville Tennessee; (4) The Old University of Nashville, Tennessee; (5) University of Nashville, Tennessee; (6) University of Nashville; (7) Vanderbilt University, Nashville; (8) Medical Department of Central College, Tennessee; (9) University of Tennessee; (10) Vanderbilt University of Tennessee.

Virginia—(1) Medical College of Virginia; (2) University of Virginia; (3) Virginia.

Fully 3 per cent. have registered qualifications unauthorized by the law, which is rather singular, as in cities where competition is greatest we would naturally expect to find the law strictly enforced, and if such looseness is manifested there the number of disqualified practitioners still practicing medicine must be very great.

If this subject is considered by the Association to be worthy of investigation, a share of its attention might also well be devoted to the pernicious, dangerous and illegal practice of counter-prescribing by druggists and druggists' clerks now prevailing in towns to an enormous extent.

In one city, with a roll of forty (40) physicians in the directory, I found ten (10) unregistered. If this proportion is true, of the rest of the State there are five hundred (500) physicians who have not complied with the provision of the law.

It has been stated that in the city of Berlin, Germany, there are 3,400 persons holding diplomas purchased in this country; surely there is no reason to suppose that the same class does not exist in Georgia, but our law requires no proof

of the genuineness of the document registered, nor of steps taken to procure it, whether by purchase or by study and examination. Here one of Dr. Buchanan's ten dollar diplomas is just as legal as that of the best college in the world acquired after years of study.*

The law, as now interpreted and applied, has proved to be practically useless in that—

1. It permits any person possessing or professing to possess in his own name a diploma from an incorporated medical college, medical school or university to practice medicine.

2. It provides no test of the value of the diploma, so that one of the Buchanan type is as good as any other.

3. The licensee is not required to exhibit his diploma to the registrar, nor any evidence that he ever had one, except his own unsupported affidavit.

4. It is not made the duty of any official to inquire whether the affidavits filed with the county clerk, under provisions of the Act, are false or true.

5. It is not made the duty of any one to see that the provisions of the Act are carried out—consequently they are neglected.

6. The law does not provide for giving the post-office address of the institution granting the diploma, so that it is impossible to test the authenticity of the document.

7. That 25 per cent. of the physicians of one city should be still unregistered shows that the law is inoperative.

8. That names other than the corporate names of colleges are sworn to by the licensees shows on their part a very great disregard of the law and of the value of an affidavit.

9. That persons are practicing upon qualifications not authorized by law demonstrates either that the law is defective or the officials negligent.

It is not strange that our officials, in obedience to the clamor of partisans, should be active in hunting down gamblers, liquor sellers and Sunday law-breakers, nor is it

*"By an edict of the Berlin State Court," says a writer of German notes in the Chicago *Tribune*, "the diplomas of M. D. bought of a now defunct medical university of Philadelphia, the holders of which in Germany were humorously styled 'Doctores Philadelphiæ,' are declared invalid, and the prosecution of such persons who persist in advertising themselves as 'specialists' in Germany on the strength solely of such diplomas is authorized. The happy possessor of such a diploma, a 'Dr.' Reseck, in Berlin, was fined 300 marks for calling himself a physician and 150 marks for wearing the title of 'M. D.'"

at all extraordinary that laws little cared for by the people should be neglected. But it certainly is a curious phase in the character of the educated portions of a community, which encourages the success of ignorance over education, and passively submits to the evasion of every law made, especially for the protection of the feeble, the helpless and the ignorant. Stranger it is to see men pretending to some refinement and education struggling vigorously in time of health to lower the standard of education of the very men from whom in emergency they demand the broadest information, and upon whose knowledge and skill they depend when sickness, pestilence and death stare them in the face; but stranger yet than all is the sight of a legislature granting a license to practice to a person whose sole qualification must have been his inability to pass a satisfactory examination before any of the bodies authorized to issue diplomas. "*Quem deus vult perdere prius dementat.*"

It is not impossible, however, that the ineffectiveness of the law is rather a fault of the careless interpretation placed upon it than the fault of the Act itself.

The Act of the State of Georgia is evidently modeled after that of the State of New York of 1880, certain sections being omitted, among which is section 4.

The omission of section 4 either leaves those practitioners moving into the State subject to the control of the incorporated medical colleges, medical schools or universities of the State, and compels them to submit to examination before these bodies, or else it permits the free influx of every medical mountebank who may desire to reside within the hospitable borders of this paradise of quacks.

The latter interpretation is the one now given to the law, but that the Association may act advisedly in the matter, I append a copy of the law of the State of New York:

"AN ACT

"*To Regulate the Licensing of Physicians and Surgeons, passed May* 29, 1880.

"*The People of the State of New York, Represented in Senate and Assembly, do enact as follows:*

"SECTION 1. A person shall not practice physic or surgery within the State unless he is twenty-one years of age, and either has been heretofore authorized so to do, pursuant to the laws in force at the time of his authorization, or is hereafter authorized so to do, as prescribed by chapter seven hundred and fifty-six of the laws of eighteen hundred and seventy-two, or by subsequent sections of this Act.

"SEC. 2. Every person now lawfully engaged in the practice of physic and surgery within the State shall, on or before the first day of October, eighteen hundred and eighty, and every person hereafter duly authorized to practice physic and surgery shall, before commencing to practice, register in the clerk's office of the county where he is practicing or intends to commence the practice of physic and surgery, in a book to be kept by said clerk, his name, residence and place of birth, together with his authority for so practicing physic and surgery as prescribed in this Act. The person so registering shall subscribe and verify by oath or affirmation, before a person duly qualified to administer oaths under the laws of the State, an affidavit containing such facts, and whether such authority is by diploma or license, and date of the same, and by whom granted, which, if willfully false, shall subject the affiant to conviction and punishment for perjury. The county clerk to receive a fee of twenty-five cents for each registration, to be paid by the person so registering.

"SEC. 3. A person who violates either of the two preceding sections of this Act, or who shall practice physic or surgery under cover of a diploma illegally obtained, shall be deemed to be guilty of a misdemeanor, and on conviction shall be punished by a fine of not less than fifty dollars nor more than two hundred dollars for the first offense, and for each subsequent offense by a fine of not less than one hundred dollars nor more than five hundred dollars, or by imprisonment for not less than thirty days nor more than ninety days, or both The fine when collected shall be paid, the one-half to the person or corporation making the complaint, the other half into the county treasury.

"SEC. 4. A person coming to the State from without the State may be licensed to practice physic or surgery, or either, within the State in the following manner: If he has a diploma conferring upon him the degree of doctor of medicine, issued by an incorporated university, medical college or medical school without the State, he shall exhibit the same to the faculty of some incorporated medical college or medical school of this State, with satisfactory evidence of his good moral character, and such other evidence, if any of his qualifications as a physician or surgeon as said faculty may require. If his diploma and qualifications, then they shall endorse said diploma, which shall make it for the purpose of his license to practice medicine and surgery within this State the same as if issued by them. The applicant shall pay to the dean of said faculty the sum of twenty dollars for such examination and indorsement. This indorsed diploma shall authorize him to

practice physic and surgery within this State upon his complying with the provisions of section two of this Act.

"SEC. 5. The degree of doctor of medicine lawfully conferred by any incorporated medical college or university in this State shall be a license to practice physic and surgery within the State after the person to whom it is granted shall have complied with section two of this Act.

"SEC. 6. Nothing in this Act shall apply to commissioned medical officers of the United States army or navy, or of the United States Marine Hospital service. Nor shall it apply to any person who has practiced medicine and surgery for ten years last past, and who is now pursuing the study of medicine and surgery in any legally incorporated medical college within this State and who shall graduate from and receive a diploma within two years from the passage of this Act.

"SEC. 7. All Acts or parts of Acts inconsistent with the provisions of this Act are hereby repealed."

As instances of what may be done toward the legitimate regulation of the practice of medicine, I would direct your attention to the States of Alabama, Illinois and Virginia, in which this Association may study with advantage the operations of a good medical law vigorously, faithfully and justly enforced. It will then be demonstrated that good medical laws are not obnoxious to a republican form of government.

Speed the day when Georgia will lift the black cloud from her medical profession.

It is remarkable that legislatures seldom rise to that noble philanthropy which would be expected of bodies of men entrusted with the power of making laws for the public good; but, on the contrary, they are unfrequently themselves actuated by motives of fanaticism and narrow bigotry. These "men of strong opinions and weak parts,"* "whose minds are like the pupil of the eye, the more the light shines upon them the more they contract"†, will carry with them into the legislative halls their personal prejudices upon all subjects, not even excepting theology and medicine.

I regret exceedingly that the very late date on which I received the lists of registrations prevented a more thorough

*Toombs. †Holmes.

analysis of the operation of the law regulating the practice of medicine in the State of Georgia. I trust, however, that I have succeeded in presenting facts enough to demonstrate that the subject should receive some consideration from this Association.

If we cannot do better, let us endeavor to have the present law stricken from the statute books of the State. Better to boldly acknowledge that we have no State enactment regulating medical practice than that we should continue to deceive ourselves and the world with the mockery of a law now foisted upon us.

So much for the Code of 1882.

ACT OF 1883.

PARTURIUNT MONTES, NASCETUR RIDICULUS MUS.

The following is copied from "Acts and Resolutions of the General Assembly of the State of Georgia, 1882–83, compiled and published by authority." Atlanta, Ga., JAS. P. HARRISON, State Printer, 1883. Page 68, part I., title IV., Code amendments.

REGULATING PRACTICE OF MEDICINE, NO. 413.

An Act to amend section 1409 (a) of the Code of 1882 in relation to who shall practice medicine by adding the following words: "or has, after attending one or more terms at a regular medical college, or were by law authorized to practice medicine and have been in active practice of medicine since 1866:"

SEC. I. *Be it enacted by the General Assembly of the State of Georgia, and it is hereby enacted by the authority of the same,* That from and after the passage of this Act, section 1409 (a) of the Code of 1882 be amended by adding the words, "or has, after attending one or more full terms at a regular chartered medical college, been in active practice of medicine since the year 1866," between the words "university" and "and," in the fourth line of said section, so that said section when amended shall read as follows: No person shall practice medicine within this State unless

he has been heretofore legally authorized so to do, or shall be hereafter authorized so to do by a diploma from an incorporated medical school or university, or has, after attending one or more full terms at a regularly chartered medical college, been in active practice of medicine since the year 1866, or who were by law authorized to practice medicine in 1866.

SEC. II. ***Be it further enacted,*** **That all laws and parts of laws in conflict with this Act be, and the same are hereby repealed.**

Approved September 27, 1883.

A Western judge is said to have delivered a negative opinion in the following terms: "If the court understand herself, and it think she do, it aren't." It would be difficult to concentrate a greater number of mistakes into so small a compass, but the General Assembly of Georgia is deserving of credit for the effort made while tediously and painfully bringing forth this deformed Act to emulate the performance of the Western judge.

Even a Georgia legislature has excelled itself in its efforts to if possible still further darken its already black record on the subject of medical legislation by enacting a new law intended to pull down the door already left widely ajar by the Code, and furnish all comers, whether they have the least qualification or not, to practice medicine, which invites every medical showman with fife and drum, with monkey and hand-organ, with a band of negro minstrels, with pantomime dress or with any of the thousand clap-trap appliances adopted by the itinerant fraternity, to visit our State and swindle our people if by good chance their criminality extends no farther.

It is difficult to decide which is most to be admired, the ingenuity of the framer of this bill or the courage of the Legislature that passed it—evidently without proper consideration. But between them they have added another laurel to the brow already notorious among the educated and thinking classes for enacting laws to foster medical ignorance and to encourage and protect dishonest debtors. Will the senti-

ments of the honorable gentlemen who composed the good old *ante-bellum* legislatures never again find voice in Georgia?

1.	2.	3.	4.
Section 1409 (*a*) *Code*, 1882.—No person shall practice medicine within this State unless he has been heretofore legally authorized so to do, or shall be hereafter authorized so to do by a diploma from an incorporated medical college, medical school or university.	*Amended as per Caption of bill of* 1883.—	*Amended as per body of bill of* 1883.—	*The Amended Section as recited in bill of* 1883.—
	or has, after attending one or more full terms at a regular ——— medical college, or who were by law authorized to practice medicine, and have been in active practice of medicine since 1866.	or has, after attending one or more full terms at a regular chartered medical college	or has, after attending one or more full terms at a regularly chartered medical college
and by compliance with subsequent sections of this chapter.		been in active practice of medicine since the year 1866.	been in active practice of medicine since the year 1866, or who were by law authorized to practice medicine in 1866.

For convenience of reference I have placed in juxtaposition, 1st, section 1409 (a) Code of 1882; 2nd, the same as amended in accordance with the caption of the Act of 1883; 3rd, the same as amended according to the body of the Act of 1883–4, the amended section as given in the Act of 1883.

A careful comparison of these four forms will develop some extraordinary facts: 1st. Different terms are used to qualify the word "college" in 2, 3, 4, so that it becomes a

matter of impossibility to determine what it is intended to convey.

This crude bill bears the stamp of illiteracy so strongly impressed upon it that there can be no hesitation in pronouncing it the handiwork of one of that ignorant class with which the operations of the "higher law" has liberally bespattered and besmirched our Legislature.

In the caption of the bill, the words "REGULAR *medical college*" are used, in the body of the bill the words "REGULAR CHARTERED *medical college*" are employed, while in the so-called *amended* section the words "REGULARLY CHARTERED *medical college*" are introduced.

When dealing with technical subjects one should, if using technical language, use it correctly, or else the terms employed should be defined. Did the framer of this Act mean a *regular* medical college, as distinguished from an *irregular* medical college? What is meant by "*regular chartered medical college?*" All *regular* medical colleges have charters. What is to be understood by the phrase, "REGULARLY *chartered medical college?*" The notorious colleges of Philadelphia, and others of the same class, are or were regularly chartered.

Already, perhaps, too much time has been occupied with this phrase, and I will now direct your attention to another.

2. The words "or who were by law authorized to practice medicine" occurring in No. 2 (caption) are omitted in 3 and are transposed in No. 4, so that what is made obligatory in No. 2 becomes an optional alternative in No. 4.

3. The words "and have" occurring in No. 2 are entirely omited in Nos. 3 and 4.

4. The words "and by compliance with subsequent sections of this chapter" occurring in No. 1 (Code, 1882) and not referred to in No. 2 (caption of 1883) are entirely omitted in No. 4; this omission, taken in connection with the

repealing section (section 2) of this bill, actually repeals this provision of the Code of 1882.

5. The words "active practice" used in 2, 3 and 4 need explanation. The Code of 1882 explains what "the words practice of medicine shall mean," but the qualifying word "active" implies more than one kind of practice, such, for example, as its opposite "*passive.*" These varieties of practice are not known to physicians.

6. The sentence "been in active practice since 1866" is ambiguous. It may mean "been in active practice" at any time "since 1866," or it might be construed to mean "been in active practice" continually "since 1866." I know that both constructions have been claimed for it.

7. The Act does not specify in what part of the world the practitioner is to have had his experience in active practice, so that it is not impossible that by placing a liberal interpretation upon the language of the Act an Indian medicine-man or an African obee or voodoo would be hailed with delight by the General Assembly of Georgia and marshaled before the world as belonging to the medical profession of this State and educated in accordance with the advanced and advancing ideas of a Georgia legislature.

8. The bill, while repealing the registration provision of the Code of 1882, fails to substitute any equivalent test.

9. The bill does not give authority to any one, nor does it under the Act become the duty of any one to inquire into facts professedly, ostentatiously and deceptively required by the language of the Act.

10. There is absolute silence in the bill touching what shall constitute evidence of the *high* qualifications required by the bill.

11. The phrase "after attending one or more full terms at a regular medical college," or "a regular chartered medical

college," or "a regularly chartered medical college," is misleading, because, while personally present, the student might be reading a newspaper or be otherwise preoccupied, and might not hear a word said by the lecturer, or hearing the words might not understand their meaning.

12. If it is intended by this bill to require evidence that an individual has attended every lecture of a term, then the bill requires an impossibility. There is not a registry of the attendance kept in any college in the United States, if there is in the world. The possession of lecture tickets is no evidence of attendance, as the tickets are bought before the lectures commence, or at least are so supposed to be.

13. A trifling matter, but one showing the illiteracy of the framer of this bill, is the use of a verb in the singular and a verb in the plural, both referring to the same noun in the singular, "No person shall . . . unless . . . , or *has* . . . *or who were.*"

If I, who am not a lawyer, and have not the least legal acumen, can discover so many mistakes, inaccuracies and inconsistencies in an Act of twenty-two lines, how many would be found by an astute and competent lawyer? And now a neat and interesting little arithmetical problem suggests itself: If twenty-two (22) lines of Georgia law contain not less than thirteen (13) errors, how many occur in the whole volume?

In the pedantic language of the classical center of the country, this bill would be called "a perditioned Machiavelian machination"

It is notorious that illiteracy and ignorance are in the ascendency in the houses of the State Legislature, but the Chief Executive has never been either illiterate or ignorant, but that laws of such a character as the one under consideration should have received his sanction, plainly shows that

there is an utter want of attention to business, a neglect of things which have the appearance of being small; evidently the stamp of approval has been placed upon this law without any knowledge of the import of the bill. The responsibility for this gross negligence of duty rests somewhere and should be placed where it belongs.

There are sins of omission and of commission, of ignorance, of negligence and of intention. How the baker's dozen of errors in this twenty-two line bill are to be classified, and how divided between the parties guilty of giving vitality to this Act, must be left to the parties themselves to determine, with a perfect confidence, however, that they will not quarrel with each other for the largest share of the honors.

Had this been a matter of a few dollars, the august Legislature would have critically examined every line of the Act and spent more of the people's money in vacuous speeches than the amount under discussion, as was done in the case of the State University at the last session; but this little bill of 1883 was only a question of education; it only affects the life and health of the "dear" people; it does not apparently touch the public pocket, and therefore these men, sworn to look after the public welfare, think they can conscientiously neglect their duty. If, on the other hand, they discussed at great length the paltry appropriation asked for the State University, it must not be forgotten that this course enabled these *solons* to pose before their constituents as public economists of the first water, forgetting to mention, however, that, while apparently saving a few hundred dollars for the public treasury, they talked double the sum out of the State exchequer and into their own pockets.

Under a monarchical government, such as England, when classes of business or professions are likely to be affected by

legislation, representative men from those opposed and from those in favor of the proposed changes are examined before a committee and the law-making power acts prudently and cautiously, while in the great commonwealth of Georgia, the Legislature, instead of consulting the wishes and welfare of a large body of citizens, permits the ideas of an individual to be smuggled into a law. This certainly is just the opposite of what might have reasonably been expected under this different form of government.

When about to legislate upon technical matters, of which of necessity the Legislature must be profoundly ignorant, common prudence, that which each individual would exercise in his own business, would dictate that counsel would be taken of experts, of men who are in front rank of progress in that particular branch of science; and if such are not to be found within the limits of the State, or if those within the State are not trustworthy, they can be found outside. Thus, in questions of medical education, the legislation of Alabama, Virginia, of Illinois, of England, France or Germany, might be consulted, but certainly the sweet will of the ignorant and illiterate member from Tarbucket county, who signs his name with a X, should not be allowed to influence the action of the Legislature, even though he desired to benefit and serve some illegitimate pill-peddler equally as ignorant and illiterate as himself.

Each Legislature, instead of devoting itself to wise and permanent legislation, seems rather to be intent upon finding some way in which to change the Acts passed by its predecessors, and passing such Acts as its successor will easily find cause to change, like some prudent mechanics who leave "a screw loose" so as to secure another job in the near future, either for himself or somebody else.

There are some educated and refined gentlemen in the

General Assembly of Georgia, and certainly the tax-payers have a right to demand that these gentlemen will see that the laws are prepared in intelligible English, despite the liberties permitted in discussion, and that when a phrase is repeated it is not changed; that transpositions of sentences, with consequent changes of meaning, are not permitted unless it is in accordance with the caption of the bill, and that liberties are not taken with existing laws which are not in accordance with the caption of the bill making the change.

It is a serious question if this bill was not obtained to be smuggled through the Legislature by some of the quack itinerants who are now—thanks to the combined efforts of our enlightened General Assembly and of our careful Chief Executive—favoring the people of Georgia with exhibitions of their wonderful healing powers, emulating in this particular even Divinity itself.

Driven from other States by wholesome medical laws, and unwilling or unable to enter the profession of medicine through the door of education, they naturally gravitate to Georgia, the Empire State of the South, whose *imperial* lawgivers, actuated by a spirit of exalted wisdom, high cultivation and advanced civilization, have chosen to put medical ignorance at a premium and medical education at a discount.

It was one of this fraternity who, when called upon to register under the Code of 1882, by the proper officer, refused to do so, and directed the attention of the official to the *scrub law* of 1883.

I could pursue this analysis to much greater lengths, but I think what has been said is sufficient to show how the public servants of this State are performing their duty, and it may be that the educated and enlightened element in the

State may take this condition of things into serious consideration, and take steps to correct this serious evil.

Upon this subject see also *The Physicians' Magazine* for March, 1886, p. 220, *et seq.*

THE ACT PROPOSED BY THE AMERICAN MEDICAL ASSOCIATION.

The American Medical Association at its last meeting prepared and ordered to be sent to the various State associations, for their action, an Act entitled "An Act to Establish a State Board of Medical Examiners and Licensers, and to Define the Duties and Powers of such Board:"

SECTION I. *Be it enacted by the Senate and House of Representatives of the Commonwealth of* —— *in General Assembly met, and it is hereby enacted by the authority of the same,* That there shall be appointed by the Governor a State Board of Medical Examiners and Licensers, consisting of nine members, three of whom shall serve for one year, three for two years and three for three years; and hereafter he shall each year appoint three members to serve for three years in place of those whose terms then expire. They shall be graduates of some legally chartered college or university, having the power to confer medical degrees, who shall have practiced medicine or surgery for a period of not less than five years, but none of whom shall be members of the faculty or of any such college or university; *Provided*, that in the appointment of said board, at least seven members shall be chosen from a list of twenty-one names submitted by the medical society of the State of ——. In default of the submission of such list the Governor shall appoint ——.

SEC. II. Upon the organization of said board, it shall be determined by lot which three members shall serve for a term of one year, which three for a term of two years and which three for a term of three years. Every appointment to fill a vacancy or vacancies in the said State Board of Medical Examiners and Licensers shall be for the unexpired term, and the said vacancy or vacancies shall be filled by the Governor within sixty days after notice to him of the same; *Provided*, that when the vacancy has been caused by death, resignation or removal of a member appointed from the list furnished by the medical society of the State of ——, the said vacancy shall then be filled from a list of three names for each vacancy furnished by the medical society of the State of ——. In default of the submission of such list the Governor shall appoint ——.

SEC. III. The said board shall be a corporation by the name and style of the State Board of Medical Examiners and Licensers of the Commonwealth of ——, and shall have and use a common seal, and as such corporation may sue and be sued, contract and be contracted with, plead and be impleaded to the extent to enable it to carry out the powers conferred upon it by this Act. Said board may make and adopt all necessary rules, regulations and by-laws, not inconsistent

with the constitution and laws of this commonwealth, or of the United States, to enable it to perform its duties and transact its business under the provisions of this Act, and shall, upon its organization, elect from its own number a President and a Secretary, who shall also act as Treasurer, both of whom shall hold their offices for a term of two years.

SEC. IV. Every person who shall be appointed to serve on said State Board of Medical Examiners and Licensers, in the manner aforesaid, shall receive a certificate of appointment from the Governor, and within thirty days after receiving a certificate of his appointment shall file the same with the prothonotary of the Court of Common Pleas in the county in which he or she shall have previously registered under the present Acts of assembly, and shall also file a certificate of his or her said appointment as a member of said State Board of Medical Examiners and Licensers in the office of the Secretary of the State of the commonwealth of ——.

SEC. V. The said State Board of Examiners and Licensers shall examine all applicants for license to practice medicine or surgery in this commonwealth who are properly qualified, according to the provisions of section vii. of this Act, and shall exclude no one from examination, nor reject him or her because of his or her adhesion to a specinl system of practice. It shall hold two stated meetings each year, one at —— on the second Tuesday in May and at —— on the second Tuesday in November, respectively, and may hold speccial meetings at such times as it may deem proper. All examinations shall be conducted in *writing*, and all examination papers, together with the reports and action of the examiners thereon, shall be preserved as the records of the said board for a period of five years, during which time they shall remain open for inspection at the office of the State Board of Medical Examiners and Licencers, which office shall be in ——.

SEC. VI. Such examination shall be in anatomy, physiology, general chemistry, pathology, therapeutics, principle and practice of medicine, surgery and obstetrics; *Provided*, that each applicant, upon receiving from the Secretary of the board an order for examination, shall also receive a confidential number, which he or she shall place upon his or her examination papers, so that when said papers are passed upon by the examiner, the latter shall not know by what applicant said papers have been prepared; that upon each day of examination all candidates be given the same set or sets of questions. It is further provided that the examination papers shall be marked upon a scale of 100, and that in order to secure a license, it shall be necessary for the applicant to attain such average as shall hereafter be determined by the said State Board of Examiners and Licensers.

SEC VII. Any person, on paying twenty dollars to the Secretary of said board, and on presenting satisfactory proof of being over twenty-one years of age, of good moral character, and of having received a diploma from any legally chartered college or university having authority to confer degrees in medicine, shall be entitled to examination by the said board, and, in case of failure at any such

examination, shall have the privilege of a second examination without the payment of any additional fee.

SEC. VIII. For the purpose of examining and licensing applicants, as well as the transaction of other business, five members shall constitute a quorum of said board, and when the President and Secretary of said board shall find that an applicant has attained the necessary examination average, they shall issue to him or her a license to practice medicine and surgery in the State of ———.

SEC. IX. After the first day of September, 1886, no person shall enter upon the practice of medicine or surgery in the State of —— unless he or she has complied with the provisions of this Act, and shall have exhibited to the prothonotary of the Court of Common Pleas of the county in which he or she resides, a license duly granted to him or her by the said State Board of Examiners and Licensers, upon which he or she shall be entitled, upon the payment of one dollar, to be duly registered in the office of the prothonotary of the Court of Common Pleas in said county, but nothing in this Act shall be so construed as to prevent the practice of medicine and surgery by any practitioner who shall have been duly registered before the first day of September, 1886, according to the terms of the present Act of assembly.

SEC. X. For the purpose of this Act the words "practice medicine or surgery" shall mean to treat or attend any person for money, gift or reward.

SEC. XI. Nothing in this Act shall apply to commissioned medical officers of the United States army or navy, or of the United States marine hospital service, nor to any member of the house or resident staff of any legally chartered medical college or university or hospital, during his term of service therein, nor to physicians of other States meeting duly registered physicians of this State in consultation, nor to those practicing dentistry exclusively, nor to midwives.

SEC. XII. The Secretary shall record, in a book to be kept for the purpose in the office of the said board, the name, age, sex, residence, date and place of graduation of each applicant, together with the date of the examination, the examination number, the examination average on each branch, the general average and date of issue of license in case such license is granted. Said book shall be open to public inspection, and on or before the last day of December of each and every year, the said board shall publish, or cause to be published, a list of the names and addresses of such persons as shall have received licenses from the said board within twelve months immediately thereto preceding.

SEC. XIII. The members of the said board shall each receive a salary, not exceeding seven hundred dollars per annum, to be paid out of the fees for examination. The Secretary and Treasurer shall receive an additional salary, to be fixed by the board, and shall give bond, in the sum of one thousand dollars, that he or she will faithfully account for the sums paid into his or her hands. The balance of the fees, after the necessary expenses of the board, which must be stated by affidavit, have been deducted, shall be paid into the treasury of the commonwealth of ——.

SEC. XIV. The Governor may remove any member of the said board for

unprofessional or dishonorable conduct upon the recommendation of a two-thirds vote of the said board.

SEC. XV. The sum of one thousand dollars is hereby appropriated to meet the necessary and legitimate expenses of the said board for the year commencing the first day of September, 1886.

SEC. XVI. This Act shall take effect on the first day of September, one thousand eight hundred and eighty-six.

SEC. XVII. Should any charge or charges of unprofessional conduct be preferred against any duly licensed practitioner of medicine or surgery, the said State Board of Medical Examiners and Licensers of the said commonwealth of —— shall have power to summon said practitioner before it, having previously given him or her fifteen days' notiec of such charge or charges, with the name or names of the party or parties preferring the same, and the name or names of any witness or witnesses to be called and examined in support of said charge or charges, and upon hearing thereof, and having heard the party or parties so accused, and any witness or witnesses he or she may desire to call as to his or her defense, the said State Board of Medical Examiners and Licensers shall, upon satisfactory proof of the truth of said charge or charges, refer his or her case to the district-attorney of the county wherein he or she shall have practiced, with all specifications and all evidences in support of the same, who shall apply for a rule upon the party so accused, to show cause why his or her license shall not be revoked, and the proper court shall have power so as to direct such licensee to be stricken from the list recorded in the office of the prothonotary of the Court of Common Pleas for the county in which the said accused shall reside.

SEC. XVIII. Any persons violating the provisions of this Act shall be guilty of a misdemeanor, and upon conviction thereof in the Court of Quarter Sessions of the county where the offense shall have been committed shall pay a fine of not less than fifty nor more than five hundred dollars for each offense.

I would suggest that it could be improved at least as follows:

1. Make the grade of examinations uniform in each State.
2. Provide for a system of representation between States.
3. Grant to graduates equal privileges in all States represented on the examining board.
6. Judges to give the matter in charge to grand juries.
7. Examinations should be oral and clinical as well as written.
8. The annual list should contain not only the names of those licensed during the year, but also the names of all persons licensed to practice medicine in the State.
9. The omission of a name from the directory should be *prima facie* evidence of disqualification to practice. (See English system).
10. It should be made the duty of some official to carry this law into effect.
11. Conflicting laws to be repealed.

REPRESENTATIVES TO AND FROM OTHER STATE ASSOCIATIONS.

Sec. 3, article 5, of the constitution says of the president: "He shall appoint annually the requisite number of delegates to the American Medical Association and to such other scientific bodies as it may be expedient to have the associations represented in."

It is very evident that this section contemplates a more intimate connection between this Association and other scientific bodies than exists at present. Naturally it would be supposed that the allusion is to medical bodies, or to bodies who deal with subjects cognate to medicine.

We cannot be blind to the fact that there is of late a tendency for each State to isolate itself professionally from every other, and to plan and work for the protection and for the advancement of the profession within its own borders rather than for the advancement of the profession at large. This movement, if carried to the ultimate, cannot but result badly, and it might be well to have this matter thoroughly discussed while it is yet in its incipiency. This state of things has no doubt been brought about by the fact that State societies practically keep aloof from each other, and we know as little of the medical societies of even our neighboring States as if they were separated by distances as great as China or Great Britain.

I submit to the judgment of the Association if it would not be to the benefit of the profession in general to inaugurate a system of representation, at least in contiguous States, and request a similar action upon their part.

PROFESSIONAL SECRETS.

"A German practitioner has been sentenced to a fine of 75 lbs. ($375, N.) for unauthorized publication of secrets. He seems to have been exorbitant in his fees, but the offense with which he was charged was that of displaying in a public refreshment-room a bill of fees to a certain gentleman, which set forth that the attendance was on his wife for a sexual complaint. The laws in most continental countries distinctly recognize the obligation of medical men to keep the secrets of patients whom they attend professionally, and are as a rule duly

enforced when necessary. * * * * * The question is based upon the great principle that the individuality of a private or hospital patient is secret. * * * * *"—*British Medical Journal, January* 16, 1886, p. 125.

In some countries (France and Germany) the revealing of a professional secret by a physician is criminal, and in many States (New York, Arkansas, California, Indiana, Michigan, Iowa, Missouri, Minnesota, Montana, Ohio and Wisconsin.—ATLANTA MEDICAL JOURNAL, January, 1886, p. 702) they are by law made inviolable. Georgia is in this matter still in the rear rank, and it may be well for this Association to take into consideration the advisability of urging the passage of such a law.

The Correctional Tribunal of the Seine has just given judgment in an action brought against a medical man for violation of professional secrets. A discussion having arisen as to the cause of the death of M. Bastien Lepage, the famous painter, Dr. Watelot, who attended him in his last illness, wrote a letter to *Le Matin*, in which the malady in question was stated. Upon this the representatives of M. Bastien Lepage took proceedings. The defendant pleaded that he meant no harm; but the court, while admitting that he was actuated by no unworthy motives, sentenced him to pay a fine of 100 francs, and the manager of the *Matin* to pay one of sixteen francs. The tribunal laid down the principle that to constitute a misdemeanor it was not necessary that mischievous intentions should be proved. Even if a professional secret had been revealed with a laudable object, the misdemeanor would none the less exist.

SELLING POISONOUS DRUGS UNDER THE FORM OF SECRET REMEDIES.

The practice of selling poisonous secret remedies to the ignorant public is one carrying with it no little danger. In

my own experience, one death has occurred during the past year which could be attributed to no other cause; but as the purchase was made in another State, nothing could be done in the matter.

One of the means of remedying this evil is by State legislation, but the true remedy lies in congressional action, which could at once make a general law applicable over the whole country.

EXPERT TESTIMONY.

The status of professional men when called upon to testify as experts; the line of demarcation between material evidence and expert testimony; the amount of remuneration to be paid for the latter, and how it should be collected, are questions which have already been before the "committee of legislation."

It is to be hoped that the committee will keep this matter constantly in view and be prepared to report thereon from time to time.

The following ruling of Judge C. C. Fuller, Mecosta county, Michigan, in the case of the People *vs.* Vaninmins, for the murder of John Crow, is of particular interest. In this connection a physician was called to testify on behalf of the defendant, and when asked for a professional opinion refused to answer until a fee for expert testimony was secured. The judge said he had no authority to secure the fee; the bill must go before the Board of Supervisors. Witness said he had had enough experience with that body to trust them no further. The judge said this question has never been decided in this State. "I can insist," he said, "on the witness answering, and if he then refuse I can fine him for contempt of court, and then let him fight it out with the Supreme Court, but after many years' study and observa-

tion, I decide that a physician's knowledge is his stock in trade, his capital, and we have no more right to take provisions from a grocery without pay to feed the jury. The court rules that the witness is not compelled to testify." The doctor at once stepped off the stand. The defendant took exception to the ruling of the court. (From *Medical Age, Vol. IV., No.* 6, *March* 25, 1886, *p.* 123.)

I also append this clipping:

FEES OF THE COUNSEL.

WASHINGTON, April 5.—Solicitor-General John Goode appeared before the telephonic investigating committee this afternoon to tell what he knew of the circumstances leading up to the institution of the Memphis suit. * * * Mr. Lowery, who occupied an exceptional position in his capacity of electoral expert, was to receive a retainer of $1,000 and per diem of $70 when in New York taking testimony, and $100 when called upon to leave the city, five hours being called a day.

PUBLICATION OF THE TRANSACTIONS.

A matter of profound importance to the Association, and one most difficult to handle, is the mode of publishing the transactions.

There are two forms in which the transactions can be published: 1st. As a separate volume, as was done before 1885, or 2nd, as a journal, as was done last year.

There are many advantages in publishing the transactions in separate volumes: 1st. They are unmixed with other matter. 2nd. The individuality of the doings of the Association is better preserved. 3d. The volumes, being bound —and well bound—are better preserved than is the pamphlet form of a journal. 4th. The risk of losing a number and thus spoiling the set is eleven-twelfths less than that of a monthly journal. 5th. Lengthy papers need not be divided. 6th. Convenience of reference.

The disadvantages incident to the annual volume are, 1st. The difficulty of getting together all the papers. 2d. The

fact that one procrastinator may delay the publication of the volume for a long time; thus all the papers read at the last meeting have not yet been published, simply because the authors elect to retain them in their hands twelve months. 3d. Through this unavoidable delay much of the value of the papers is lost; the world moves too quickly now-a-days to admit of such delays. What is new and original and valuable to-day may in a year be utterly worthless in the light of later discoveries. 4th. There is no incentive to authors to write if they know their thought will remain bottled up for a year. 5th. The readers of our essays are only the members of the Association, 252 in number. It is not much of a stimulus to an author to know that his effort will reach the eye of but two or three hundred medical men. 6. The sphere of usefulness of the Association is sadly curtailed—nay, its very existence might be unknown outside its own membership. 7th. The Association has not got the money at its command to publish its transactions in the form of an annual volume, so that it has been necessary to solicit advertisements to aid in the publication. The Treasurer's report in 1884 shows the Association to have been in debt $199.51. The report of 1885 gives no figures relating to the subject. 8th. The Association has to assume the risk of printing copies of the proceedings for delinquent members. 9th. It provides no means of inter-communication between the members.

THE JOURNAL SYSTEM.

The advantages of the journal are, 1st. Prompt publications of the proceedings—last year they appeared in May. 2d. Stimulating the authors of papers to promptness by publishing the papers in the order of their reception. 3d. Protecting the prompt writer by removing him from the

retarding influence of the procrastinator. 4th. Giving to members at once such material as is on hand and the rest in the order of its reception. 5th. The Association takes no risk whatever, but makes a sure profit *per capitum* on its membership whether small or large. 6th. It furnishes a means of surely and certainly reaching the members whenever the occasion arises in the *interim* between the meetings of the Association. 7th. The proceedings reach a large number of non-members, and show that this is a live Association, and thus we may hope that interest in the Association may increase, its membership be enlarged and its influence and power extended.

The disadvantages of the journal are 1st. The flimsy binding. 2d. The increased risk of losing numbers. 3d. The division of lengthy articles into two or more parts. 4th. The chance that the Association may be accused of partisanship in the selection of a medium of publication. 5th. The interlarding of the proceedings of the Association with a quantity of foreign matter. 6th. Inconvenience of reference.

The success of the *British Medical Journal*, the organ of the British Medical Association, may be cited as a fair reply to some of these disadvantages.

Reviewing the whole subject carefully, in my judgment the preponderance of advantages is greatly in favor of the journal form.

SUGGESTIONS AS TO AWARDING THE PRINTING.

If the journal system is determined upon, I would suggest that the publication be awarded to the bidder offering to the Association the most favorable terms, and that in

making a selection the Association or its committee shall be guided by the following considerations: 1st. Extent of circulation, that our proceedings may be read by the greatest number. 2d. Lowest cost to the Association, that there may be an annual income accruing to the Association from its membership to defray incidental expenses that may arise. 3d. The subscription price of the journal should be as near the price of the annual subscription to the Association as possible, that we may not give a premium to readers to keep out of the Association by furnishing our proceedings to non-members at a lower rate than they are furnished to our own membership.

Bids might be received and considered in two forms—either *en masse* for the whole number necessary to supply the wants of the Association, or at a rate *per capitum*, as at present. In either case the expenses of the postage, stationery and other printing (such as circulars, etc.) for the Association should be included.

We must not shut our eyes to the fact that upon this subject conflicting business interests will clash, and it therefore behooves the Association to approach this subject with a determination to do full justice to the Association and ignore all other issues.

In the past this Association suffered by dissensions caused by party strife. I pray you not to lose sight of the fact that this is a State Association, existing by the will of the profession of the State for the benefit of the whole It is not the creature of any city, county or section, nor any college or journal, or printing-office, or clique of any kind, and I beg that you will frown down any effort upon the part of any officer or member to make this anything but a State Medical Association.

I consider it my duty to make these remarks because I appreciate the difficulty of making decisions without being swayed by inclinations, and I feared that through good nature or personal friendships the interests of the Association might be jeopardized.

THE ASSOCIATION DORMANT.

For some reason to me unknown, the Association has not been increasing in numbers and in influence with the rapidity which its friends would desire and its importance deserves. The general profession do not manifest the same interest in it that they should. They show to it an apathy not at all in keeping with the relations borne to them by the Association.

It is not my desire to enlarge upon this subject, but simply to direct your attention in this channel.

It has been suggested to me that our plan of organization is at fault, and the remarkable success of the Medical Association of the State of Alabama has been instanced as an example for us to follow Acting upon this suggestion, I wrote to Dr. Jerome Cochran, the senior censor of the State Association, and the moving spirit of the Alabama system, asking for information as to the organization of the Alabama Association.

I append extracts from Dr. Cochran's reply, which convey valuable and interesting information for which we cannot but feel under obligations to the writer

Should this Association consider it advisable to appoint a committee to investigate this subject, members might be found residing near the border of Alabama who would undertake the task with but little personal inconvenience. Pending an investigation, I have no suggestions to make.

EXTRACTS FROM LETTERS OF DR. COCHRAN ON THE ORGANIZATION OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

"The Medical Association of the State of Alabama has succeeded so remarkably for two reasons—

"(1). In its organization and discipline it approximates a military standard and ignores all the ordinary clap-trap of freedom and equality. We have a Board of Censors who manage everything. We have a College of Counselors, one hundred in number, who pay the expenses and do the work of the Association. The county societies hold charters from the State Association, and are strictly subordinate to it, and their members are *ipso facto* members also of the State organization. We do business in a business way. We pay our Secretary and our Treasurer, and the last gives bond in the sum of three thousand dollars for the faithful performance of his duty. We have a regular ritual for the revision of the rolls—the roll of the county societies—the roll of counselors—the roll of correspondents—the roll of officers. At their revisions every county society is called and must give an account of itself. If the account is not satisfactory, it is referred to the Board of Censors for investigation, and if it proves incorrigible we take away its charter. Every counselor also is called and must be accounted for. If he has failed in payment of dues, or in attendance, without hesitation his name is struck from the roll and some one elected in his place. If he was old, revered, influential and had given years of service to the Association, still there would be no hesitation. His head would go. In a word, we enforce our rules without respect of persons, and our order of business is such that nothing is overlooked or neglected. We are not liberal. We are strict, rigid; we are not generous—can't afford to be generous. We are simply just. As far as possible—I fear it cannot be done entirely—we banish all wire-pulling and office-seeking.

"(2). Our Association and our county societies have something to do—have a good deal of important work to do, and they do it. There is no bond like this to hold men together. We have entrusted to us by the State the administration of the law to regulate practice and of the health laws of the State. We have an Examining Board and a Board of Health in every county, as well as a State Board of Examiners and of Health, all under the jurisdiction of the State Association. The County Boards examine only those who have diplomas, and reject a great many of these, too. The State Board examines non-graduates. Each one of our county societies, large or small, is allowed two delegates. The delegates and the counselors constitute the voting body of the Association, and a counselor must be a member of a county society. One main purpose we have in view is to maintain and magnify the usefulness of the county societies.

"Associations fail for various reasons: Greatest reason of all, they too often have no sufficient *raison d'etre*. Next most important reason, lack of discipline, which leads to a third reason, neglect. Men are lazy, doctors especially. They won't work."

Dr. Wm. Abram Love has been appointed Fraternal Delegate to the Medical Association of the State of Alabama, and from him we may expect a most interesting, valuable and suggestive report.

DELAY OF AUTHORS IN FURNISHING COPIES OF ESSAYS.

The Committee on Publication have been sadly hampered and impeded in their work during the past year by the delay of authors to send in "copy." Some of the papers read by title at the last annual meeting were only sent to the committee last month. Amendment VII. to Constitution and By-Laws reads:

> "All papers intended to be published in the transactions of this Association shall be placed in the possession of the Secretary within two weeks after adjournment."

The members will see the utter impossibility of successfully editing the transactions unless the amendment just quoted is strictly complied with. Thus it is some of the papers read in session of 1885 will appear in the transactions of 1886, to the great mortification of the Committee of Publication, who will receive all the censure which should justly fall upon the procrastinating authors.

I feel confident that it is only necessary to direct the attention of the members to this matter to have it remedied at once.

DEFECTS IN THE BY-LAWS REGULATING THE PRESIDENT'S TERM OF OFFICE.

The By-Laws of this Association provide that the "President, Vice-Presidents and Censors shall enter upon the duties pertaining to their office at the commencement of the annual meeting succeeding their election."

I desire to express the opinion that in the case of the President the operation of this By-Law works to the detriment of the Association, in that it takes from the officer who is to preside over your annual meeting the power to speak authoritatively to the members until the assembling of the body; therefore the real work of getting up a good meeting, if any is done, must be done by the retiring President, and done for the benefit of his successor.

The only advantage that can possibly come from the present method is that it gives the President a year to prepare an address; but this could just as well be made the duty of the retiring President, and being a personal matter would be done by him just as well upon his retirement as upon his inauguration.

Of many methods which suggsst themselves for the correction of this evil I will mention but two:

(1.) Let the President enter upon the duties of his office immediately upon the adjournment of the meeting at which he is elected, and let the retiring President deliver the annual address, which shall include an account of his acts during the year preceding and suggestions for the improved working of the Association.

(2.) No matter how arranged, let the retiring President, when introducing his successor, give to the Association an account of his stewardship, of his official acts during his year of office, with such suggestions as his experience would dictate as being useful to increase the efficient working and influence of the Association.

No officer would venture to come before this Association and acknowledge that its trust had been misplaced, and that during his year of office the Association had been dormant; that he during the year passed had done nothing to stimulate professional interest in the Association; that he had

not raised his hand to add to the influence of the Association; that no effort had been made by him to enlarge the attendance at our meetings nor any act of his done to augment the scientific value of our gatherings nor to increase our membership.

By the present arrangement the Association absolutely deprives itself of any advantage it might derive from suggestions which could be made by the retiring President touching the working of the Association because he virtually has none upon which to found an opinion.

As this question is only one of By-Law it can be amended by a two-thirds vote of this meeting if the Association should desire to do so.

Of course the change will shorten the official term of the present incumbent, but I am not only willing but anxious that it should be done, because I believe it will redound to the benefit of the Association by throwing in a great measure upon the shoulders of the presiding officer the responsibility for the success of the meeting.

PATENTS.

A somewhat extended inquiry into the opinions held by progressive physicians in various parts of the country has convinced me that there is an increasing dissatisfaction with that portion of the "Code of Medical Ethics" regulating the holding of patents by physicians, which mixes up patents for surgical instruments, patents for medicines and secret nostrums in inextricable confusion. The language of the Code is as follows:

"SEC. IV Equally derogatory to professional character is it for a physician to hold a patent for any surgical instrument or medicine, or to dispense a secret *nostrum*, whether it be the composition of exclusive property of himself or of others; for if such nostrum be of real efficacy, any concealment regarding it is

inconsistent with beneficence and professional liberality; and if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them."

INSTRUMENTS.

Some of the objections urged to including surgical instruments in this prohibitory section are: 1st That while physicians may not patent instruments in the United States, it is not unethical to do so in other countries. 2nd. Foreign physicians and inventors generally, as for example surgical instrument-makers, do patent surgical instruments, both in this country and abroad, and these instruments are freely purchased and used by regular physicians. 3rd. That it is impossible under the existing arrangement to insure that an instrument sold is just what it purports to be, each maker modifying the instrument to suit his own notion until the design of the inventor is entirely lost, although *he* will still be held responsible for all failures. 4th. That by no possibility can the originality of an invention be determined, so that pirating is common, and the same instrument is often claimed by numerous inventors. Other objections have been urged, but these are sufficient to show the line of argument.

PROPRIETARY MEDICINES.

Many regular physicians now prescribe proprietary medicines which, while not professedly secret remedies, are exceedingly close to it, and much unfavorable comment has been thus occasioned. Certainly distinction is needed between a "patented medicine," a "proprietary medicine" and a "secret *nostrum*."

PUFFS IN SECULAR PAPERS—CERTIFICATES GIVEN TO NOSTRUMS.

At the session of 1883 (see page 24 proceedings) the Association spoke in unmistakable terms of disapproval of the practice of giving certificates to patent or secret medicines and other similar practices in the following language:

"The Board of Censors consider it to be their duty to call the attention of the Association to the habit, which prevails to a great extent among members of the profession, of permitting their names to appear as indorsing patent or proprietary medicines, remedies, diets, mineral waters, etc., in which indorsement their official designation appears.

"Likewise would the board bring to the consideration of the Association the frequent appearance of paragraphs in secular papers, in which allusion is made, either by name or by unmistakable allusion, to physicians in connection with cases or other medical matters. The appearance of these indorsements and paragraphs is suggestive of connivance by permission, if not direct personal influence, of the physician himself, in procuring its publication.

"Such conduct is certainly contrary to the spirit of medical ethics, and the Board of Censors desire that the Association hereby express its condemnation of such practices."

There is little use in endeavoring to correct the evil in this State when from other parts of the country comes the evidence that prominent members of the profession are constantly violating the spirit and letter of the ethics in this particular.

It might be well that our delegates to the American Medical Association should be instructed to draw attention to this subject, that the Association may condemn such conduct, no matter what may be the prominence or influence of the offender, or else expunge that portion of the ethics from the Code as being a dead letter.

The following is the language of the Code of Ethics upon this subject:

"SEC. 3. It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases, publicly offering advice and medicine to the

poor, gratis, or promising radical cures, or to publish cases and operations in the daily prints, or suffer such publications to be made, to invite laymen to be present at operations, to boast of cures and remedies, to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician."

A PRESIDENTIAL PRIZE ESSAY AND ENDOWMENT FUND.

It goes without saying that it is the duty of those who are honored with the most prominent position which the medical profession of the State can bestow to do, each in his turn, something to advance the position which the Medical Association of Georgia occupies in the scientific world.

It is not enough that he to whom you entrust the guidance of the affairs of your Association should content himself with obeying the letter of your law and nothing more, that he should rest satisfied with reading an inaugural address and presiding over your annual deliberations.

Your Constitution says that "he shall, in the intervals between the annual sessions, direct and control the general policy and business of the Association." Clearly, then, it is the special duty of your presiding officer to have the best interests of the Association constantly before his mind, and to make to the body when annually assembled such suggestions as will, in his opinion, tend to advance the Medical Association of Georgia towards professional and scientific eminence.

One of the advantages to be derived from a frequent change of officers is that each year will bring to the Association some new idea, some new plan, which will permanently increase the professional influence of the Association and enlarge the sphere of usefulness.

No one will deny that original observations are the foundation of progress in medicine, and it follows that if this Association would be true to itself, and would study its own

interests and that of the profession of the State of Georgia, it would make a persistent and determined effort to foster and encourage original research. This means money, for there are but two ways occurring to me by which it can be done: 1st. By grants from the Association, as is now done by the British Medical Association; and 2nd, by a permanent system of prizes of sufficient value to stimulate research to be offered for original essays. In the present financial condition of the Association, the first proposal is absolutely impracticable, but the second does not seem so difficult. I beg, therefore, to suggest to the Association the following plan:

1st. Let there be organized a system of annual prizes for original research and investigation, to be known as the President's prize, to be awarded under such rules and regulations as the Association may determine.

2d. Let it be understood that it is the sense of the Association that every President shall contribute one hundred dollars to this fund upon his inauguration.

By the adoption of this proposal the Association would be in the possession of an invested fund, constantly increasing in size until it would be of such value as to enable the Association to amply reward an investigator for the labor and expenses necessarily attendant upon original research; to such a prize the Association might also add a life membership in case of the successful essayist being a pay member or subsequently becoming one.

I do not make this proposition for the purpose of affecting others and exempting myself from its operation; if the Association adopts this proposal, the Committee on Prize Essays is hereby authorized to add to the Prize Essay and Endowment Fund, as my contribution, the sum of one hundred dollars, which I will pay on their demand.

I know I will be met by the stereotyped objection that many good men are too poor to afford this. But by way of rejoinder, I would say that if one will assume honors he should be prepared to pay for them. If one wears a good coat he must pay for it; if one moves in respectable society he must pay for it—he must pay for his education, he must pay for his diploma, he must pay for everything.

Every President of this Association has twelve months' notice of his election, and he can stop his wines or tobacco or other luxuries to the amount of two dollars a week, and give the sum total to the President's Prize Essay Fund; and any man who appreciates the honor conferred upon him so little as not to be willing to make this sacrifice is, in my estimation, unworthy of the position.

In this very city there will assemble next month an association which is purely social in its character, yet in that body by mere force of custom the presiding officer feels compelled to annually offer one or more prizes for the exhibition of such characteristics or qualities as are considered of value to the society. Can it be possible that the President of the Medical Association of Georgia, the most important scientific body in the State, will object to doing that which is freely done by the officers of a social organization?

Is the highest scientific position in the State of Georgia of so little importance in the estimation of the members of this Association that each is not willing in his turn to make so trifling a sacrifice in return for the honor conferred upon him?

I trust the Association will express a favorable opinion of this suggestion, for there is much that we can do with a small invested fund. "All things come to him who can wait."

EMBOLISM OF ABDOMINAL AORTA.

By GEORGE H. STONE, M. D., Savannah, Ga., Chairman Section on Surgery, First District.

Mrs. E. B. ——, age sixty-two, native of South Carolina. Previous history:

For the past six years she has been conscious of a disease of the heart (aortic insufficiency). The first manifestation six years ago, which directed attention to deficient circulation, was an attack of numbness, with pricking sensations in the lower extremities.

On June 19, 1885, I was called to see her and found her suffering from malarial fever, which yielded readily to quinia; at this time she stated that on the 10th of June, 1885, she had twice fallen to the floor while attempting to cross the room; there was no vertigo, but simply an inability to stand Ever since the fall she has had numb sensations in the lower extremities. Upon the subsidence of the febrile condition, June 23, the pains or numbness increased in intensity; the mouth was drawn a little to the right She described the pains as a horribly intensified numbness with sticking, pricking darts of intense pain; this condition was accompanied by great hyperasthesia, with some loss of tactile sense in the lower extremities. The bowels have acted freely nine times to-day without medication. Temperature normal, pulse weak, heart's action irregular and very weak, and lower extremities cool. One-fourth grain morphia, adminis-

tered hypodermically, completely put her at ease and gave her a good night's rest.

June 24 a. m., temperature 98½°, pulse 90; p. m., temperature 99°, pulse 94, tongue light white coat.

The paroxysms of pain returned as soon as the effects of the morphia had subsided.

Some considerable loss of tactile sense began to be perceived in the feet, although motion was perfect and great hyperesthesia still existed. If the attendants attempted to rub either of the limbs she would complain, but with the feet covered so that she could not see the hand of the attendant, she was unable to locate the spot or even the foot touched or to decide whether either had been disturbed. The femoral artery was now pulsating faintly, the lower extremities were cold, and when not under the influence of the morphia her sufferings were excruciating. Diagnosis made of embolism riding the bifercation of the abdominal aorta.

To meet the weak condition of the heart, Squibbs' fl. ext. of digitalis in three minim doses every four hours was given, and rubbing the lower extremities was commenced. June 25 a. m., temperature 98°, pulse 84; p. m., temperature 98½°, pulse 100, pulsation at femoral very faint; passed a comfortable night under the influence of the morphia, the sufferings commencing again toward morning. To-day is but a repetition of yesterday, except that the symptoms were a little more intensified. Gave camphor grs. iii. at one dose.

June 26 a. m., temperature 98½°, pulse 100; p. m., temperature 97°, pulse 112, symptoms still deepening, paroxysms more severe, heart action much stronger, pulse fair, perspiring freely, lower extremities colder, pulsation at femoral scarcely perceived, tactile sense lost as far up the legs as middle third, motion still intact, hyperesthesia and

cramping, sticking, numb sensation intensified. Consultation called this p. m., Dr. Wm. Duncan responding, and from this time we continued the case together. Treatment: Fl. ext. digitalis, one minim every two hours. Spirits ammonia arom. teaspoonful every two hours, alternating with the digitalis. Camphor in the event of symptoms of heart failure. Morphia to quiet pain.

June 27 a. m., temperature 98°, pulse 114; p. m., temperature 98°, pulse 112, tongue heavily coated with centre uncovered, condition about the same as yesterday; continued treatment, but reducing doses according to results obtained.

June 28 a. m., temperature 97°, pulse 120 Passed a miserable night, getting no relief until one-half grain of morphia had been given hypodermically, and the same quantity by the mouth. This morning the mind is clear, the pain intense, the heart beating quite full and regular; worn look to face, no pulsation at femoral, surface of lower extremities cold, flexor surface turning purple, sensation lost as far as middle third of thighs; the anxiety of the patient was more to be relieved from pain than as to general condition. 12 noon, temperature 98°, pulse 120. Complexion sallow, anxious, drawn expression to countenance; eyes dull, inclined to be apathetic, although talked clearly and understood well; complains of pain in back when lifted. Purple color of extremities deepening.

At 6:30 p. m., temperature 99°, pulse 130, respiration 30. Apathetic condition deepening and verging on coma, twitching of arms occasionally, deep sallow hue to face, tongue clearing, heart weaker, purple color extending all over legs and thighs, and very much intensified where it first appeared, groaning respiration as though from dyspnœa, no pain.

At 10 p. m., temperature 100°, pulse 150, respiration 30. Voice thick, memory gone, dimness of vision, speaks when aroused, but no connected train of thought, dark color of extremities intensified, restless, retention of urine, catherization relieved restlessness, urine albuminous.

June 29, 2 p. m., temperature 101°, pulse 150. Restless, incoherence of speech, groping with hands, sight gone, evidently in great pain. Administered one-fourth grain morphia hypodermically, which produced a little quiet. Gradually the voices of one after another of her nearest friends became indistinct to her, although some still had the power of recalling her wandering senses, until as the gray dawn was breaking in the east to usher in another day, coma, like a dark pall, enveloped the case and obscured the symptoms, one after another, until the case was closed from our sight, and at 10 a. m , after a severe struggle, she sank to rest.

Post Mortem.—One-half hour after death. Body warm; rigor mortis not established; face deep sallow; body well nourished; lower extremities dark purple color, but skin still intact. Owing to desire of friends only the contents of abdomen was examined. All the organs in the abdominal cavity were normal, except the liver, which showed a deep bronze color. The abdominal aorta from just below the diaphram to the bifercation was completely filled with a dense clot, the clot extending down through both comon illiac and into both the internal and external illiac arteries of both sides.

REPORT ON GYNECOLOGY—FOR THE FIFTH DISTRICT.

By WM. ABRAM LOVE, M. D., Atlanta, Ga., Chairman Section on Gynecology.

The object of the appointment of the several sections for the different congressional districts of the State being in part to gather clinical reports of cases of interest or importance to the profession, to the literature or the science of medicine, in preparing the following partial report for the Gynecological Section for the Fifth Congressional District, selections have been made with a view to presenting cases of interest showing *results* of treatment as well as cases calculated to serve as a basis for any comments that may seem in place pertaining to the pathology or treatment of the same. With this view the following is presented:

A CASE OF RECTO-VESICO-VAGINAL FISTULA, WITH RUPTURE OF THE PERINÆUM AND EXTENSIVE SLOUGHING OF THE BASE OF THE BLADDER—SUCCESSFUL TREATMENT BY OPERATIONS—SUBSEQUENT GESTATION AND PARTURITION AT FULL TERM WITHOUT RE-RUPTURE.

On March 10, 1883, was called to a distant village to see a case, in consultation with a brother physician, Dr. A C. North, the leading practitioner of that section.

The patient, a blond of short stature, compactly built, aged thirty-six years, resided in the interior of the State of New York, but had spent the winter in the South—her na-

tive State—as well for the benefit of her general health as for the purpose of being with her parents during her approaching first *accouchment.* She was well developed, her general health good, and she seemed to have nothing to fear in her coming ordeal more than was to be expected with one of her age in first labor.

Her labor, which terminated February 28th, was at first tardy with extreme rigidity of tissues. The child was large, estimated at twelve to thirteen pounds, with breach presentation. The labor continued for over thirty-six hours, the latter part of which was severe in the extreme. By manual aid the shoulders and head were delivered without instruments, though considerable force had been required in the effort—*child still-born.*

On examination, ten days after delivery, I found the perinæum, which was unusually short, lacerated externally to and including the greater part of the sphincter ani muscle; the whole of the perinæal body had parted, the rectum had been lacerated in an anterior median line from the little remaining portion of the sphincter muscle up in the direction of the vaginal *cul-de-sac.*

There was no laceration of the uterine neck; it presented an appearance healthful for the puerperal stage; the *lochia* was normal. Removing the secretions with the dressing syringe, the entire base of the bladder, brought into view by the speculum, presented the appearance of the peel of a boiled Irish potato. Notwithstanding this sphacelated condition of the base of the bladder, the urine was still retained and voided under the direction of the will, though the condition of cystitis existing caused frequent and painful micturition. There was considerable irritation of vaginal mucous membrane from the discharge of intestinal contents into vaginal cavity.

Apprising the patient and the parents that the sphacelated portion of the bladder would slough away and the urine as secreted pass into the vagina, advising the free use of antiseptics, emolients and absolute cleanliness, the patient was placed under general treatment until such time as she would be in a condition to undergo the operations necessary for her relief.

On March 24th, I was again called to see her for the reason that the sphacelated portion of the bladder had not been detached and thrown off, and septic poison was feared from its retention. On using the vaginal wash on 25th, the entire slough passed away, twenty-five days after parturition. By tactal and specular examination it was found that the entire base of the bladder, extending from side to side of the septum and antero-posteriorly from the upper end of the urethra to and beyond the opening of the ureters, had sloughed. Through the speculum the bladder presented, herneated, through the orifice produced by the sloughing, and from the distal margin the urine could be seen dripping from the ureters. The vesical mucous membrane showed much vascular engorgement, that of the vagina inflammatory action from constant contact with the renal and rectal discharges. These excoriations, together with the vesceral tenesmus, added to the annoyance of the continuous exudations from bladder and bowels, rendered the patient's condition painful and distressing in the extreme. The rents in the perinæum, the perinæal body, the walls of the rectum and bladder showed healthy granulations, save from the excoriations mentioned above. The case was left, continuing treatment, frequent ablutions, the free use of disinfectants, antiseptics and emolients with nitrate of potash and biborate of soda internally to reduce the acridity of the urine, with opiates as needed. In the latter part of May the patient, with her mother as

nurse, presented herself in Atlanta for the necessary operations.

May 23d, having had her bowels thoroughly emptied and washed out; under the anæsthetic influence of ether, the first operation was performed on the bowel.

Assisted by Dr. F. H. O'Brien, Dr. W. W. Greer, Dr. Thomas D. Love and the mother, the patient was placed in the recumbent posture on the operating chair, anæsthized, the edges of the laceration in rectum denuded with knife and scissors, the parts drawn together with deep-seated sutures of silver wire, eleven in number. Then the edges of the vaginal mucous membrane were brought in position with superficial silk sutures, between the silver wires, a piece of a Nélaton catheter inserted into the bowel to allow the escape of gas, and the knees bandaged together. When the patient had recovered from the effects of the anæsthetic, a dose of morphine was administered and she put to bed, a spoon diet prescribed, the morphine repeated every six to eight hours and the bowels kept locked for the following eight days. During this period the vagina was kept washed daily with carbolic acid water, followed by the free use of vasaline to protect against the excoriating effects of the urine constantly dripping from the ureters.

On the ninth day the bowels were evacuated by suspending the opiate, the administration of laxatives and the free use of enemata. The stitches were then removed, when the union was found to be complete, except at the lower point adjacent to the remaining unruptured portion of the sphincter. At this point, from the giving way of a suture, the action of the sphincter, or some obstruction in the drainage tube and the pressure of gas, an opening the size of a crow quill remained, which allowed of the escape of gas and watery fluids from the bowels.

The patient was then allowed to leave her bed, was placed upon a generous diet and given time to recuperate her strength preparatory to the next operation.

A slight attack of dysentery delayed somewhat the second operation.

June 30.—The patient having been prepared by thorough alvine evacuation, the second operation, or first operation on the bladder, was undertaken, assisted by Dr. James A. Gray, Dr W W. Greer, Dr. C. F. Benson, Dr. Thomas D. Love and the mother.

To the success of the operation there were several and serious obstacles. First. Nearly the entire base of the bladder had sloughed away from the pressure in parturition. Second. The opening extended from side to side of the vesico-vaginal septum. Third. The central portion of the proximal edge of the rent involved in the destruction, not only the circular fibres of the mouth of the bladder, but had included the upper end of the urethra. Fourth. On the distal edge were the open dripping extremities of ureters. Fifth. The very small amount of tissue left with which to construct a new base, realizing the fact that the vesico-vaginal septum was the least elastic portion of the entire cystic wall, yet knowing the contractility and the distensibility of these tissues under uterine displacements on the one hand, and the process of parturition on the other, it was determined to try the effect of repeated operations, should that be necessary, rather than draw upon the uterine neck partially or completely for material to supply the loss, as has been recommended in such cases. Fully anticipating all the difficulties, I determined to risk the repeated operations, should they be necessary, believing this course to be best for my patient in the end. With this determination the patient was placed on the operating chair in the

left lateral position, hips elevated and ether administered to anæsthesia. A broad-billed Sims speculum was inserted and placed in the hands of an assistant. Retraction brought to view the cystic pouch protruding like a hernia through the extensive opening once occupied by the base of the bladder. A sound was inserted through the urethra with which this pouch was pressed forward out of the way. The orifices of the ureters were sought out, slightly slit upon their cystic side and the cut edges touched with liq. ferri. perchlor. to prevent union. With tenacula and Vulsullum forceps the proximal and distal edges of the bladder were, by the application of considerable force, brought together. Seeing that this could be accomplished, with the hook and Vulsullum, with knife and scissors, the edges were denuded, using every precaution to avoid involving the vesical mucous membrane. Time was then allowed to control the hæmorrhage, which was slight, and to stop any oozing of blood from the denuded surface. Iced carbolic acid water was used freely for this purpose, and in fact during the entire operation. The oozing stopped, silver wire sutures to the number of seventeen, were inserted with the curved canula needle, the denuded edges thoroughly cleansed with the carbolic water, when the edges were drawn together, the wires consecutively twisted and re-twisted until the denuded edges were brought in proper position—not, however, without making considerable tension on the central stitches, particularly at the vesical neck and upper end of the urethra.

In inserting the wires, the canula needle pierced a small vessel which gave some trouble before the hæmorrhage was thoroughly controlled. The sound was then removed, the bladder thoroughly washed out, and put somewhat upon the stretch to test the apposition of the parts. There appearing no leakage at any point, the sound was re-inserted, the

wires cut short and turned back against the vaginal wall, the sound removed, and the bladder again distended with water. There presented no leak; the apposition was as perfect as could be desired, though the tension on the central sutures was considerable, drawing the uterus forward toward the symphasis pubis. This tension, it was hoped, would aid in producing the desired elongation of the tissues involved.

The operation satisfactorily completed, the patient was placed in bed, a Sims sigmoid catheter inserted, the knees bandaged together, and when the etherization had entirely passed off, morphine was administered to allay pain, produce rest, and keep the bowels under control. Vesical tenesmus soon became severe. This was to be expected, from the fact that the central sutures involved the circular fibres of the neck of the bladder on either side and the urethra in the centre. The catheter was changed and the morphine, combined with atropia, was increased with the hope of controlling the trouble, but it did not, and on the second day the urine passed tinged with blood, the amount of which increased until the coagula clogged the catheters. To remove the clot from the bladder the cavity was washed out repeatedly with tepid water seasoned with common salt. On the third day the vesical hæmorrhage, together with the tormina, had become so severe that it was deemed advisable to leave the catheter off, consequently the cavity was again thoroughly and repeatedly washed out with the tepid water seasoned with salt and then with water acidulated with acetic acid for the purpose of checking the hæmorrhage; this produced the desired result; then the atropa-morphia brought the tenesmus under better though not complete control. On the fourth day it was discovered that urine in small quantity was passing into the vagina while some was still voided by the urethra. This leak continued to in-

crease until the entire secretion was discharged through the vesico-vaginal opening. Desiring to gain as much as possible on the distension of tissue, the stitches, which were deeply taken, were not removed until the eleventh day, being left to support such adhesions as may have taken place on either side of the middle line where the extreme tension on the silver wires was expected to cause them to cut through.

On the eleventh day, in removing the stitches, it was seen that the three central ones had given way, leaving an opening a third of an inch laterally. This failure was first from the extreme tension upon the stitches, and secondly because they embraced that part of the viscus where the vesical and urethral muscular fibres run in different directions, and at a point where the peripheral nerves awaken reflex action through the spinal centers, producing contraction, expulsory of the bladder; this, too, tended to aggravate the vesical tenesmus.

For the purpose of giving time for elongation in the tissues, to enable the patient to recuperate after the confinement and suffering, and to avoid another operation in the extreme hot weather, she was given time, placed upon a generous diet and another operation deferred until September 12th. At this time the patient, having been prepared as before, was placed upon the operating chair in the left lateral position and ether administered to anæsthesea. On examination the opening in the bladder was found much the same as when the stitches were removed. On either side extended the band of union between the distal and proximal edge; they were bound together for the most part by a thin layer of neoplastic tissue extending from the vesical opening in either direction to near the lateral edges of the original slough; there being little or no power in such tissue to unite,

an effort to close the orifice, with this remaining, even should union take place in the tissues of the septum proper, would result in a double fistula, one on either side, and the operation would be a failure. The only course which promised success was the removal entire of these cicatricial bands of union. With the knife and scissors this was accomplished. This enlarged the opening again almost entirely across the septum. The edges properly pared and cleansed, fifteen deep silver sutures were inserted, using curved needles armed with double silk thread as carriers for the silver wires, and the needle carrier for their insertion. While the canula needle is quite convenient and handy in use, it is objectionable—first, because its point presents a cutting edge, and secondly, the wire is entirely too small for the track of the needle, the one endangering hæmorrhage from wounded vessels, the other leaving a lurking place for the seeds of septicemia. With these stitches the edges were brought together, and while the tension on the lateral ones was very much diminished, on the central two or three it was very considerable, producing quite a strictured condition of things at the upper end of the urethra. The bladder was washed out and water inserted to test for any leak; there appearing none the patient was put to bed, the catheter inserted, the knees bandaged, and when the effects of the ether had passed off she was given atropa-morphia to produce rest. The catheter produced some tenesmus, which subsided in a few days; they were changed daily, the bowels kept bound and the case treated generally as before.

About the sixth or seventh day the bladder sprang a leak as before.

On the ninth day the stitches were removed; union had taken place as before, with the exception of a point directly at the urethral junction. Here an orifice presented itself,

the size of a crow quill, just at the strictured point alluded to above. From this point the cicatrix extended laterally as before, but not quite to the same extent, for at either extremity of the opening to a limited extent the tissue union had been complete without the interposing band of neoplastic tissue. The patient was again placed on a generous diet to recuperate her strength and prepare her for what it was hoped would be the final operation.

October 10th she was brought to the operating chair again, after due preparation as before, ether administered and a thorough examination made. This revealed the fact that something had been gained again on the distension of the tissues, and it was hoped that the operation would be entirely satisfactory; with this hope a double operation was performed. First, the neoplastic bands were with the knife and scissors carefully dissected away, and fourteen silver sutures inserted, using the curved needle, double-threaded, and the needle carrier. These sutures were twisted, cut short and bent back against the walls of the vagina. A test of the bladder with considerable pressure showed no leak. The prospects of complete union seemed so good that it was determined to finish up the case. The patient, still under the influence of the anæsthetic, was placed in the lithotomy position and held there; the Sims speculum was reversed, pressing against the newly inserted sutures, and the operation on the rectum, and for lacerated perinæum, performed. It will be remembered that there was left a small leak in the bowel just at the junction of the partially ruptured sphincter muscle, and it will be further remembered that the perinæum was unusually short, while the entire body of the perinæum had been parted in a median line from end to end. To close the bowel was a necessity, as a support to the uterus now drawn downwards and forwards by the

operation, for the vesico-vaginal fistula, the restoration of the perinæal body was essential, but as a precaution against a re-rupture, in the event of future parturition, which was possible, it was thought best to make only a partial closure of the external rupture of an abnormally short perinæum. With these facts and considerations to determine me, the operation was performed. The edges of the bowel were pared, the severed perinæal body, together with the lower edge of the external perinæum, including the remaining portion of the partially ruptured sphincter, were thoroughly and carefully denuded, cleansed and carbolized. Double needled threads of silk were used; one needle was thrust from without through the rectum on one side, and brought out through the fistulous opening; the other needle was passed through the opposite side; three sutures were thus inserted, when they were drawn together, tied, cut short, and the ends with the knot pushed through into the cavity of the rectum, into which the sutures would be eventually discharged. With strong silver sutures the body of the perinæum was restored and the external perinæum partially closed. The parts being thoroughly washed with carbolized water, a drainage tube was inserted into the bowel, a catheter into the urethra, the patient was placed in bed, and the knees bandaged together. When she rallied from the ether, atropa-morphia was administered and repeated as occasion demanded to bind the bowels and keep the patient at ease; a spoon diet was prescribed, the patient watched, and the catheter changed for a clean one once a day.

Though she suffered some with nausea and vomiting for the first thirty-six hours, she rallied well from the shock of the double operation, and gave token of success in both. On the second day and for a few following days, she had fever,

but it yielded to quinine, when the case progressed much as after former operations.

The stitches were removed, part of them on the ninth day, part not until the eleventh. The union in the rectum and perinæal body had been complete, presenting as good results as could have been desired; after the removal of the catheter it was ascertained that the accumulation of urine in the bladder to the amount of a fluid ounce would cause a leak through the vesico-vaginal septum.

Examination revealed a valvular pin-hole opening opposite the upper end of the urethra. This was touched with the platinum probe dipped in nitric acid, but being in the cicatrix accomplished nothing. This cicatricial tissue united the edges of the bladder and would cause ultimately the elongation of the proper tissues of the septum. With this view and for the purpose of allowing the patient, who was somewhat reduced, to recuperate her strength, she was sent home with her mother to spend the winter and return in the early spring, when the prospects were that another operation would complete the cure.

Early in April, 1884, she returned and was at once prepared for the final operation. On the 6th she was placed on the chair, ether administered, and the parts examined. The tension on the tissues had passed away, the septum had thickened considerably, presenting a deep transverse crease between the proximal and distal edges, the base of the groove being the neoplastic tissue by which they were united and held together. This was dissected away in its entirety, the edges freely pared, when seven deep-seated stitches of heavier silver wire, with eight more superficial stitches of lighter silver wire, were inserted alternately, the parts thoroughly cleansed and carbolized; when the deeper stitches were drawn together and *double-shotted*, the more

superficial stitches were then drawn up and single-shotted. This brought complete coaptation of the freely denuded surfaces with but a slight degree of tension on the stitches. The wires were left long, brought together with the ends projecting outside the vulva, where they were well wrapped at the ends with silver wire. (Dentists' guttapercha, dipped in boiling water and moulded around the ends of the wire, I find to serve a much better purpose; it fixes the wires together and covers the ends completely, presenting no rough or jagged surface; for its removal the wires can be clipped with the scissors in detail, or severed at once, with the bone forceps).

The patient was thence treated as before, using the catheters, which were changed daily, keeping the extra one when not in use immersed, as before, in strong carbolic water.

On the 9th day the stitches were all removed and the bladder tested with warm water. The distension, pushed with the pump as far as prudence would permit, revealed no leak whatever. The union of the denuded surfaces had been complete, presenting no transverse furrow, as before, following the successive operations.

Time soon revealed the fact that there remained of the sphincter vesicæ muscle quite a sufficiency to retain the urine for a considerable time, and that its retention or voidance was under the control of the will. The patient was directed to retain it from time to time, to the extent of her ability to do so without too much discomfort, for the purpose of distending the bladder and increasing its capacity, after having contracted for a period of more than thirteen months.

While the bladder could not, from loss of so much of its tissue at the base, resume its former calibre, sufficient capacity was restored to render the patient comfortable and at ease under any ordinary circumstances.

A final examination revealed in the parts—bladder, rectum, perinæal body and external perinæum—a condition little indicating the severe and repeated operations that had been performed. The patient was discharged, well and happy in the realization of the fact that she had been relieved from a condition worse than death itself. Thus rejoicing, she took her departure for her distant home among the hills in the interior of the State of New York.

Not many months after this I received a letter from her informing me that she was again pregnant—a letter filled with many forebodings of evils to come, for she had very naturally pictured to herself, in prospective, a repetition of all the terrible ordeals through which she had passed as a sequel to her first confinement.

Words of cheer and encouragement to hope for better results were reiterated in the correspondence that followed until she had passed the ordeal.

Desiring to know definitely the results of the test through which the formerly ruptured tissues had passed, I wrote to the physician who had attended her in her accouchment, giving an outline of the case. In reply he sent me the following communication:

CACHECTON, N. Y., September 25, 1885.

Wm. Abram Love, M. D.:

DEAR SIR—Yours of the 22d in regard to Mrs. N—— received and contents noted with much interest. I had had a fair description of case from the patient before the confinement and apprehended considerable danger, but my apprehensions soon vanished. I was called the morning of March 16th and reached the patient about four o'clock, found her comfortably sick, had been complaining about three hours. Upon examination found the os dilating nicely—then about two inches—and all the parts seemed in a proper condition I could discover nothing at this period of any previous trouble, except a little shortening of the perinæum; so nicely were the parts united that I did not detect the cicatrix. As soon as the os was fully dilated and the head commenced its decent, I administered chloroform. The parts yielded nicely, and at 9 a. m. she was delivered of a healthy, fully developed male child without any difficulty, and upon examination

after found the parts in as good condition as before the labor commenced. There was no *re-rupture* of anything, and she has had a comparatively easy labor.

I congratulate you on making a successful and satisfactory repair of what must have been a very extensive injury.

I have seen her several times since her confinement; she was about attending her household duties as though no trouble had ever befell her.

Any other information I can give you in regard to the case I will do with pleasure.

Respectfully yours,

WM. W. APPLEY.

The results given in the letter quoted above, from Dr Appley, demonstrate conclusively the correctness of the policy pursued in the treatment of the case throughout, both in the operations and in the delays

First. In the efforts to produce elongation in the vesico-vaginal septum, the least elastic portion of the bladder, yet a tissue capable of distention to a very great extent, even rapidly, as shown in parturition, or more slowly, as demonstrated in uterine misplacements and their treatment, in the growth of tumors, and in other pathological conditions. This was accomplished by the repeated operations through the tension of the silver sutures, then by the bands of adhesion that held together the proximal and distal edges, until by a vital physiological process the elongations could take place that would supply the deficiency caused by the slough.

Second. In the repeated and entire removal of the bands of neoplasm, an inelastic tissue of low vitality that stretched across the septum from side to side, an unyielding tissue that, even if it closed completely the opening, would be likely to part in parturition, producing a new fistula. The course pursued corrected these evils and resulted in repairing the damage with the least possible deposit of cicatricial tissue, leaving the septum susceptible of distention in the process of parturition that might follow in the future.

Third. In the incomplete closure of a perinæum, preter-

naturally short, a rupture, or a re-rupture for the most part, commences at the vaginal edge. Distended to its utmost under pressure, it parts at the edge, when, in an instant, the work is complete, whether limited or extensive in extent. Had the external perinæum in this case been closed completely, short as it was, parturition without parting it would have been almost if not quite impossible, and once begun, the extent of the rent could not be foretold. In this case the result shows that the better course was pursued in closing but partially the external perinæum. The parturition has doubtless elongated still more, the septum longitudinally, while at the same time the passage of the head has put to the test the transverse union.

I cannot conclude a report of this case without expressing my obligations and many thanks to Dr. James A. Gray, Dr. F. H. O'Brien, Dr. W. W. Greer, Dr. C. F. Benson, Dr. J. F. Lancaster and Dr. Thos. D. Love for their very efficient aid and assistance in these several operations, and to Dr. T. D. Love for kindly attention to the patient in the after-treatment following each operation.

PHOSPHATIC CYSTITIS WITH VARICOSE VEINS OF AND HÆMORRHAGE FROM, THE BLADDER, COMPLICATING A CASE OF RETROVERSION WITH CHRONIC ENDO-METRITIS, GIVING RESULTS IN SUCCESSFUL TREATMENT.

Mrs. ———, aged twenty-two years, a well-developed brunette, the mother of one child, aged eighteen months, had suffered much at her menstrual periods with menorrhagia. This drain upon her system was supplemented by severe, continuous leucorrhœa, and her life made miserable by chronic inflammation of the bladder. Under this complication of diseases she had been reduced in flesh and strength, the more serious suffering being caused by the constant calls

to relieve her bladder. At times she passed purulent matter, at others voided blood; particularly was this the case as she approached and passed through her menstrual periods, the menstruation being profuse.

During such a period, at a midnight hour, feeling faint from loss of blood, she left her bedside for the door of her room to summon help. In her effort she fainted and fell to the floor; the fall aroused the family, who found her in an unconscious condition. I was at once summoned to see her. Found her weak, semi-conscious, and pulseless. Proper restoratives were resorted to, under the use of which she reacted. Soon, however, an irrepressible desire to relieve her bladder arose, and in doing so she again lost a large quantity of blood, bringing on syncope. Restoratives were again resorted to, ergot administered hypodermically and by the stomach. To guard against a recurrence of the hæmorrhage the vagina was tightly tamponed, and opiates administered freely to overcome the vesical tenesmus. Under this treatment she rested quietly for twelve hours. At the end of this time the desire to relieve the bladder became inordinate, but the effort proved ineffectual by reason of the pressure of the tampon upon the urethra. This was removed and the pressure relieved. In relieving the bladder again, a large quantity of blood was lost, followed by fainting as before. So soon as reaction could be established, the patient was placed in proper position, the speculum inserted with the intention of washing out the vagina and re-applying tampon. To my astonishment, neither the vagina nor the womb presented evidence of *uterine hæmorrhage.* A further investigation revealed a varicose condition of the veins of the uterine neck and of the vesico-vaginal septum. The blood that had flowed so freely was evidently from the bladder, and was most likely from some of the varicosed

vessels whose walls had given way under ulcerative action inside the bladder. This did not present a hopeful prospective, but I saw no better course to pursue than resort again to the tampon, administer anodynes and insist upon absolute rest in the recumbent posture.

There was no evidence of blood-clot in the bladder, and I could account for this only on the supposition that the fluid flowed through orifices of the varicose veins, under the pressure of the columns of blood in valveless vessels in the viscera, and was voided before coagulation could take place. This opinion was strengthened by the fact that the hæmorrhage had not occurred, or at least had not been so formidable, except at such times as the patient had been in an erect posture. I had met varicose veins in the vulva and vaginal walls of pregnant and parturient women, but never before in these locations in the non-pregnant, nor in connection with cystitis, especially complicated with ulcerative action, such as evidently existed here.

As the best means of treatment, the patient was kept in the horizontal posture, opiates and cholagogues administered, the tampons changed, and the catheter used from time to time without the recurrence of serious hæmorrhage. So soon as the urine had cleared up, it was examined chemically and microscopically. It was strongly alkaline in its reaction, and presented pus, mucus, and blood corpuscles, amorphous urates, disintegrated epithelia, and was heavily charged with triple phosphates. The sound inserted into the bladder revealed the existence of these crystals clinging to the lining membrane like stalagmites and stalactites from base to fundus, communicating to the sense of touch such a sensation as would result from scraping the sound over the surface of wet sand paper. This condition of the mucous membrane induced a constant desire to micturate; day and

night the desire was continuous, destroying the patient's rest, and dooming her to a life of indescribable misery. In view of the bladder trouble, the uterine misplacement and complications in the case sank into insignificance, yet, as they served to aggravate the symptoms by placing the utero-cystic attachments and base of the bladder on the stretch, by keeping up a condition of congestion through the intimate vascular relations, by increasing the hypo-stasis and hypostatic hyperæmia in the varicosed veins, and by interfering with free nervous and vascular action in both bladder and womb, attention was directed to the removal of the retroversion and the relief of the endometritis. To support the walls of the distended vessels, to drain the tissues and lighten the womb, cotton tampons or carded wool tampons, surrounded with cotton, well saturated with glycerine, were freely used, packing the vault of the vagina and around the neck of the womb as tightly as the comfort of the patient would permit, ultimately a properly adjusted pessary was used to correct the misplacement. In course of time, by endometric medication, the endometritis was effectualy relieved, but the condition of the bladder continued to give incalculable trouble.

In the treatment of the case, every effort was made to restore the digestive functions and build up the general health; mineral acids and bitter tonics, ferrugenous preparations and a generous diet, were resorted to for this purpose, and to change the alkalinity of the urine, other aids were called in; for the purpose of allaying the chronic inflammation of the bladder and restoring a normal condition of the kidney secretion, buchu preparations, the balsams, benzoic acid, pareira brava, borax and a host of other agents were administered, yet without avail. With a double catheter the cystic cavity was washed out daily, and a stream of water,

acidulated with muriatic, acid played through it for the purpose of dissolving away and washing out the phosphatic deposits adherent to the lining membrane, but all this gave only temporary relief.

From time to time, with the return of the menstrual molimen, came congestion of the bladder, perhaps further ulcerative action, and another outpouring of blood from the bladder, sometimes from the congested condition of the lining membrane, sometimes from the ulcerative action destroying the thin walls of the varicosed vessels, but never again was it so severe as when I was first called to the case. Washing out the bladder clean, and pouring through it a stream of water, acidulated with acetic acid, seemed to control the hæmorrhage better than any other course of procedure adopted, when the bleeding was seemingly the result of congestion in the lining membrane, but the tampons and the horizontal position were required when it was seemingly from giving way of the walls of the varicosed vessels under ulcerative action. These attacks would come on suddenly without premonitory symptoms, just as suddenly as the hæmorrhage from an ulcerated varicose vein of the leg, requiring the compress and bandage, the elevation of the limb or the use of the varicose needle for its arrest. For this condition of cystic ulceration, many remedies were resorted to by injection. Any injection into the bladder requires care in the manipulation. The bladder does not tolerate rapid distention, particularly in an inflamed or ulcerated condition. The apparatus constructed for use in this case consisted of a double catheter and a few feet of light rubber tubing, one piece connecting the supply tube of the catheter with a vessel holding the fluid to be inserted, the other piece of tubing connecting the drain-pipe of the catheter with a receptacle for receiving the wash as it passed from

the bladder. With pressure on the drainage-tube to prevent or regulate the exit of the fluid, the pressure on the walls of the bladder, or the flow into it, could be regulated by elevating or lowering the supply vessel. This syphon apparatus would allow of the reflux of the fluid into the supply vessel on contraction, sudden or spasmodic, of the bladder walls, thereby preventing the severe pain that would follow the contraction upon a fluid that could not be expelled. With this apparatus the bladder was washed out daily, and medicated injections used. Solution of sulphate of hydrastin was tried effectually, solution of nitrate of silver used again and again. While this washing out and medicating the cavity served to give some relief, it did not cure the patient.

One great trouble in the treatment of the case was in trying to hold the urine at a normal acid reaction. There is, as a general rule, very little trouble in converting an acid into an alkaline urine, but the reverse of this proposition is a much more difficult matter. Under the alkaline urine the deposits of crystals of triple phosphates upon the lining membrane, alluded to before, would increase, and the irritation or inflammation increase apace. To remove them the weak solutions of muriatic acid or nitro-muriatic acid was used to dissolve or wash them away.

During these efforts to produce relief, the patient's suffering was at times intense. The repeated hæmorrhages from the bladder, together with the menorrhagia, had produced an exsanguined condition that was becoming alarming. Loss of rest from the vesical tenesmus, pain in the head, loins and sacchral region, a condition of extreme nervousness with general prostration, made life miserable.

During all this time the portal system had been closely watched, and cholagogues administered when indicated. The bowels had been kept in a soluble condition; ergot, iron,

nux vomica, and quinine, together with mineral acids and bitter tonics, had been tried effectually. The condition of the skin had not been overlooked; baths and sponging had been resorted to, when deemed advisable, to keep up proper cutaneous action, well remembering the compensating action between the skin and the kidneys. Under the use of glycerine tampons, and endometric medication, conjoined with the other treatment, the subinvolution and the endometritis had been to a very great extent corrected, still the bladder trouble continued; lactic acid was substituted for the mineral acids and the patient put on an exclusively milk diet, skimmed milk, sour milk, and buttermilk. Under this regime she improved, but did not recover. The cystitis continued. She complained of sand-like, gritty substances that became lodged in the urethra, and became a new source of irritation and torment; on examination they were found to be prismatic crystals of the triple phosphates, and on using the sound they were found again, in abundance, adhering to the cystic lining membrane.

On consultation with leading members of the profession, the course recommended was—puncture of the vesico-vaginal septum and the establishment of a vesico-vaginal fistula. Such a plan of treatment is advised by the standard authors. While such a course might be admissible under many circumstances, in this particular case I could not consider the proposition, for, had all things else been favorable, the existence of the mass of varicose veins permeating the septum, the bladder and the uterine neck, would preclude the practice. Even admitting that the opening might have been made through some selected site in the septum, the fistula established and the cystitis relieved by the drainage, the condition of varicosity of the parts would make an operation for

the closure of the fistula both bloody and dangerous, and most likely defeat every effort to effect a closure at all.

About this time there appeared in the *American Journal of Obstetrics* a description of Professor Goodman's self-retaining catheter, and its use in chronic cystitis. I lost no time in procuring a set, together with light elastic tubing and a rubber urinal to be attached to the leg. One of the catheters was inserted, the proper attachments made, and the patient directed to wear it day and night for the purpose of keeping the bladder thoroughly drained. There was some difficulty as well as some pain attending the insertion of the catheter, and some vesical tenesmus followed at first from the pressure of the flanged internal end pressing against the irritated lining membrane just inside the circular fibres of the neck, but this gradually subsided. In less than twenty-four hours after insertion, the catheter became clogged, rendering its removal necessary; removing it, it was found to be filled, packed, with the triple phosphates. It was cleansed and re-inserted. Day after day this operation had to be repeated, sometimes twice in the twenty-four hours. With the bladder kept empty, however, the tribasic phosphates ceased to form; those attached to the mucous membrane gradually desquamated and passed off, when the patient became more comfortable in her condition and soon seemed on the highway to health. So soon as she learned well the use of her apparatus, she was sent to the country, under the use of the lactates, restricted for a season to the milk diet. As she improved she gradually ventured further in her regimen and ultimately made good her recovery. She wore the catheter with its accompanying apparatus for about four months. Since that time I have watched this patient through two utero-gestations, and been with her in her confinements. Each time she has made a bad record for hæm-

orrhage and nervous prostration, but when she rallied from the shock and passed her puerperal stage, she recuperated rapidly to her normal standard of good health. In all this she has had no return of her cystic trouble; still she clings with a tenacity to her catheter and its accoutrements from fear of a like misfortune befalling her in the future.

Subsequent experience in a like class of diseases convinces me that there are few cases of cystitis and ulceration of the bladder in the female, if any cases at all, that cannot be cured by such a course of treatment without resort to the terrible expedient of producing vesico-vaginal fistula, an expedient rendering necessary, for its correction, an operation at once tedious and severe, and not entirely unattended with danger.

Some cases will not tolerate the Goodman catheter well on its first introduction, and it may be found necessary to remove it for a while, but ultimately this intolerance may be overcome. The improvement of Dr. Skeene is in many respects an advantage. It is more readily introduced, and presents a perforated conical ball to the circular neck of the bladder less liable to irritate. It is better in any case to supply the patient with two catheters, that the one may be thoroughly cleansed while the other is in use. Neglect of this may lead to serious results from septic action.

After an experience of forty years in general and special practice, added to a thorough course in college clinics and hospital work, I have to say that no case of cystitis, or ulceration, or hæmorrhage of the bladder, has ever given me so much trouble or my patient so much pain and suffering as the case outlined, and merely outlined, above.

The case has been reported here for the purpose of presenting in this connection some physiological and patho-

logical facts not sufficiently dwelt upon, if attended at all, in the text-books and standard works of the profession.

Skeene, in his valuable work, published since the above case occurred (Diseases of the Bladder and Urethra in Women), says (page 8): "The vascular supply of the bladder is very free, being derived from the superior, middle and inferior vesical arteries and branches from the uterine artery. They all arise from the anterior trunk of the internal iliac artery. The anastamosis of the arterial twigs are numerous and free. The veins are also numerous and large, forming by interlacement and connection thick, tortuous plexi about the base, sides and neck of the bladder, *and finally terminate in the internal iliac veins. This plexus about the neck of the bladder communicates freely with that of the labia minora, uterus and rectum.* These are the chief elements in the so-called 'hæmorrhoids of the bladder'" [varicose veins of the bladder.]

Now, this description of Professor Skeene is perhaps the most concise and complete to be found, yet it does not cover the ground. Works on anatomy and physiology, on obstetrics and gynecology, in giving the vascular relations of the pelvic viscera, seem to content themselves with following out the distribution of the arteries, and then conclude with some such expression as that just quoted, that the veins "finally terminate in the internal iliac veins." While these are facts, they are not all the facts, for there is an intimate and important capillary anastimotic relation between the portal system on the one hand and the venous systemic sys tem on the other. This intimate relation is important in all pelvic disorders, and especially those involving the rectum, uterus or bladder. The plexus of veins about the neck of the bladder communicate freely, not only with the labia minora, uterus and rectum, but by a regular net-work of capillaries, with the bladder throughout, with the vagina,

with the uterus to the pampiniform plexus on either side with the vesico-vaginal septum, and with the lower middle plexi of the rectum. The blood from the posterior and upper rectal plexi of veins *does not* pass ultimately into the internal iliac veins, but into the inferior hypogastric, thence into the inferior mesenteric, which joins with the superior mesenteric, splenic and gastric to form the portal vein. This, branching and ramifying in the liver, breaks up into another set of capillaries, to be again united in the hepatic veins. By these the blood reaches again the systemic circulation in the ascending vena cava. Now, any obstruction to this portal circulation, whether in the liver or in the abdominal viscera, produces pressure on the more pendant vessels, increasing that pressure in the ratio of the height of the column, or the obstruction to the onward flow, a pressure that over-distends both veins and capillaries, giving rise to varicosity in the rectum, the neck of the uterus, vagina, vesico-vaginal septum, and bladder, extending even to the labia minora in some instances. In these distended capillaries the blood is slowly changed, and in proportion to the stasis the nutrition is interfered with, ulcerative action follows, and the vessels give way, when formidable hæmorrhage follows.

Such was the condition of the case reported above. Varicosity of the vesico-vaginal septum, under the hypostasis, added to the vesical irritation and inflammation induced by the phosphatic deposits. This, aided by the abnormal condition of the urine, produced ulceration, and perforation of the varicosed vessels inside the bladder. When the patient elevated the body into the erect posture, the pressure from the double columns of blood, one in the dilated vessels leading to the ascending vena cava, the other in the more indirect route through the rectal plexus to the portal system,

neither guarded by valves—there was nothing to retard the flow through the bladder.

It is a well-established fact that no operation on these pelvic organs is unattended with danger, for in certain conditions of the system—conditions, too, not indicative of danger—the most trivial operation may be followed by fatal peritonitis. I had reason to fear such a condition in my patient. Even did that not exist, with the vesico-vaginal septum a perfect net-work of varicose veins, extending into the bladder on the one hand, and back through the vesico-uterine septum and uterine neck on the other, the idea of producing a vesico-vaginal fistula could not be entertained. Had such a fistula been produced, its repair by surgical procedure would prove impracticable in such a septum—a septum filled with, almost entirely constituted of, a net-work of varicose veins.

Varicosity of the veins of the pelvic viscera during utero-gestation is not so uncommon an occurrence, but it generally terminates with the utero-gestation. That in this case they originated during the preceding pregnancy, I have no doubt, but they did not end with it. In malarial regions such a pathological condition is more common, arising from obstructed portal circulation, giving rise to hæmorrhoids in the rectum, and these ulcerate and bleed, as they did in the bladder of my patient; such a condition is common among men; it was this that induced Stahl to contend, two centuries ago, that the men of Saxony menstruated. It is the same pathological condition from malaria that brings up menorrhagia, metroragea and recurrent menstruation in the malarial belts, and renders it very doubtful whether the pregnant women will complete their term of utero-gestation, if they have to pass through the month of October. Under such circumstances varicose veins in the pelvic viscera are

not uncommon, but I have yet to see another case where the varicosity was so extensive or where it penetrated the bladder with such fearful results as in the case in point.

The great factors in effecting the favorable termination in this case were:

First—Keeping the bladder drained absolutely, day and night, by the self-retaining catheter, giving it rest and removing the irritating urine.

Second—Keeping off portal congestion by the free use of cholagogues and laxatives.

Third—By the free use of tampons making pressure to support the walls of the distended vessels, and in that way doing away with the condition of *stat* in the blood, thereby promoting more healthful tissue changes.

Fourth—By a proper administration of tonics and a selection of suitable articles of diet to change the kidney secretions and promote the general health and strength of the patient.

I have no doubt of the varicosed condition of the capillaries and veins of the pelvic viscera being at the bottom of her bad record for hæmorrhage, though with proper precaution and preparation for her parturition, the hæmorrhage has been less and less with each succeeding confinement.

A CASE OF GENERAL SENSORY AND MOTOR PARALYSIS, COMPLICATING UTERO-GESTATION TO FULL TERM, AND ITS INFLUENCE ON THE PROCESS OF PARTURITION, WITH SUCCESSFUL RESULTS.

On March 14th, 1868, I was called to Terrell county to see, with Drs. Jeffries and Lunday, Mrs. T., aged 21 years, and suffering at the time from a miscarriage at an advance of about two and a half months.

On examination found the lady suffering from retrover-

sion of the uterus, which had been most likely the cause of her mishap. She was placed under proper treatment, and when she had recovered from the effects of the miscarriage, April 14th, I was again called to see her in consequence of severe menorrhagia. When she had passed this period she was placed under treatment, and in May passed her menstrual period normally. July 9th I was again consulted by the patient, who was found to be again *enceinte* and feared another miscarriage. Thence forward she was kept under watch-care; the uterus mounted up from its retroverted condition, and rising above the promontory of the sacrum, the case progressed favorably until October 14th, when my attention was again called to her. She had now advanced to about four and a half months—utero-gestation.

The cause of my services being demanded on this occasion was seemingly very slight, yet she evinced an unusual anxiety about it. The only cause of complaint was a feeling of numbness in her thumbs and index fingers and in her great toes; said she could not feel her needle and thread in attempting to sew.

Regarding the trouble as trivial, I advised her to use salt baths, warm, friction, etc., and to give herself no uneasiness about it.

On the 11th of November I was again called to see her. I found the numbness had extended to her wrists and ankles, involving all the fingers and toes, and that the power of motion was beginning to fail her in the same order that had been evinced in the loss of sensation. A thorough investigation of her case revealed nothing abnormal, save the loss of sensation and of motion.

Thinking that some malarial taint might exist as a cause of the trouble, she was given cholagogues to correct any portal derangement, and then placed upon quinine, iron and

nux vomica, aided by stimulating baths, friction to the spine and general surface of the body, particularly the extremities, and the case watched closely. Apace with the progress of her utero-gestation progressed the sensory motor paralysis. The remedies were pushed—the nux vomica preparations—to the effect of producing muscular twitching. Arsenious acid and other therapeutic agents added from time to time, but with absolutely no perceptible remediable effect. The galvanic and the magneto-electric-battery was applied faithfully but futilly.

December 31st she evinced some signs of premature labor, but an examination by taxis revealed no dilation. The fœtal head could be felt through the uterine walls. Anodynes quieted the disturbance very readily, and the case progressed as before. At this time sensation had been lost to the body in both upper and lower extremities, and motion so much impaired that the patient was no longer able to stand on her feet, nor to use her hands. Remedies were pushed as far as it was deemed advisable to push them, keeping in view the safety of the child in utero. During the month of January the case progressed as before.

On the 28th a careful examination revealed complete paralysis of both sensation and motion in the extremities and to a great extent of the body. The patient was absolutely helpless. In whatever position she was placed, in that position she remained, limbs and body, until it was changed by another. Her condition was such as to awaken much anxiety as to its effect upon her approaching parturition. So far as I had access to the literature of the profession, I examined carefully for kindred cases, but found none. Anticipating trouble in her accouchment, I bespoke the aid and assistance of my friend, Dr. Sims. The patient was watched closely, her secretions kept corrected so far as possible, her

nutrition kept up, her position changed frequently, and everything that kindness and close attention could do for her was done.

February 25th, at 4 o'clock p. m., the first symptoms of labor presented themselves, and I was summoned to her side, which I reached at 6 p. m., accompanied by my friend, Dr. Sims, and prepared for any emergency. I found her labor progressing, uterine contractions regular; an examination revealed slight dilation of the os uteri with cephalic presentation normal. To my astonishment and gratification the labor progressed regularly and naturally without an interruption, and at 1 o'clock, nine hours from the occurrence of the first pain, the patient was delivered of a healthy, well-developed male child, weighing ten and a half pounds; the post partem contractions were firm, the uterus delivering the placenta at the end of seven minutes. Without unfavorable symptoms, the patient made good recovery from her puerperal condition. The mammary secretion was soon established, and while the patient made good her recovery from her puerperal state, the long-standing inaction in the sensory motor nerves had left its impress, and the restoration of sensation and motion was tardy. The same plan of treatment pursued during her utero-gestation without effect was pursued with more favorable results. That the patient might be removed from malarial influence, as the spring advanced she was sent to the higher altitudes of North Georgia; the following winter she was sent to the Florida coast, where she could obtain the benefits of the baths of the warm sulphur springs in that section, keeping up her treatment in the meantime as she passed from place to place. She ultimately made good her recovery. From a letter recently received from her I learn that since this confinement she has had two other miscarriages at about three

months, one premature labor at seven months, and six regular confinements at full term. In none of these has there been a return of the sensory or motor paralysis.

This case has been here presented for the purpose of illustrating, to that extent at least, the independence of the motor action in the uterine ganglionic system in the process of parturition.

ANTI-PARTEM PUERPERAL CONVULSIONS WITH THE CONDITION OF THE UTERUS DURING THE PERIOD OF CONVULSION IN THE SKELETAL MUSCLES SHOWING INDEPENDENCE OF UTERINE NERVOUS ACTION OR INACTION, WITH RESULTS.

At 10 o'clock p. m. I was called to West End to see a lady sick. Not informed as to the nature of the case, I found on arrival that she was in the first stage of labor with her second child. She had been taken with symptoms of approaching labor late in the afternoon. On examination I found the os uteri thick, soft and dilated to the size of a nickel. The case was one of cephalic presentation, and as nothing abnormal presented in any way, either as to the progress of the labor, or the condition of the patient, the case was allowed progress without interference. It passed on as a slow case of labor until one o'clock a. m. At this time, suddenly and without warning, the patient went into severe convulsions. Not prepared for such an emergency, I dispatched a messenger for aid and instruments, chloroform, etc. It was midnight and two miles to the city. The convulsive attacks were severe and long-continued, so much so that I feared delay would result in death. I then determined to make an effort to turn and deliver by the feet. On passing my hand through the vulva into the vagina, I met with some rigidity of tissue. This overcome, in the effort to introduce the hand into the uterine cavity, to my

utter astonishment the os uteri, but partially dilated, offered almost no resistance, and the wall of the uterus seemed *flacid*, this, too, during the severe clonic spasm in the skeletal muscles. I found no trouble in grasping the feet and bringing them down.

In the flacid condition of the uterus, I felt a little afraid to complete the delivery lest post partem hæmorrhage should follow. Soon the convulsive movements ceased, when the delivery was completed; the placenta followed without much delay, and mother and child did well.

REMARKS.

This case has been presented, in juxtaposition with the preceding case of paralysis during pregnancy and parturition, as serving in some measure, to show the independence of the uterine motor nerve, to a limited extent at least, in the process of gestation and parturition. Whether in all cases of eclampsia, or convulsions during labor, there is a like innibition in the uterine motor nerves, I am not in a position to assert. Whether all cases of paralysis of motion and sensation, or motion or sensation during gestation, will influence as little the process of parturition as the case here reported, I am equally unable to say, and I report these cases for the purpose of, and with the hope that, they may, call forth the results of the observation of others of my brother-practitioners, to the settling of the questions at issue. In conclusion, I will be pleased to have the experience of others, either directly or through the channel of the medical press.

In submitting this report the chairman of the Section on Gynecology for the Fifth Congressional District, would beg leave to state, in justice to the other members of the section, that it is based entirely upon cases in his own private prac-

tice; it has not been acted upon by the section—if such a course has been the custom—the writer holds himself alone responsible for the same.

This statement is made in justice to the other members of the section.

THE TREATMENT OF EMPYEMA.*

By HUNTER P. COOPER, M. D., Late Resident Assistant Surgeon Presbyterian Hospital, New York; Adjunct Professor of Chemistry, Atlanta Medical College.

A brief recital of the leading features of the following case, together with a description of the operation performed, will furnish a text on which I will base my remarks:

William Sutherland, aged 23, of Providence, R. I., was admitted to the surgical division of the Presbyterian Hospital during the early part of 1885. For over a year he had been suffering with very severe symptoms, referable to the right side of the thorax, consisting of pain, cough, expectoration, fever, emaciation, and finally a spontaneous discharge of pus from the pleural cavity.

The opening which took place in his chest occurred, without surgical interference, about six or seven months previous to admission. A free discharge of pus from this opening (situated in the second intercostal space in front) continued until his entrance to the hospital. Under the steady drain of this discharge his general condition rapidly depreciated and hectic fever ensued.

When he first entered the hospital, examination of the patient revealed the following condition:

Emaciation and anæmia are well marked; pulse and breathing accelerated; in respiration only the left side of the chest expands; on the right side the chest-wall is rigid

*Reported from the Section on Surgery for the Fifth Congressional District.

and sunken; the ribs are crowded together and very tender on pressure. There is an opening in the second intercostal space about three or three and a half inches from the median line. This opening gives vent to a large quantity of creamy yellow pus every time the patient coughs or makes muscular exertion From the second intercostal space downward there is flatness on percussion, the whole cavity of the chest being evidently full of pus. The lung is crowded into the upper and posterior part of the thoracic cavity, and, judging from the length of time it has been subjected to pressure, it has evidently undergone carnefaction.

Clearly the case was one for surgical interference, and the following operation was performed by Dr. Charles K. Briddon, the attending surgeon:

The patient being etherized, the chest is scrubbed with soap and water, then washed with mercuric bichloride solution (1-1000). A vertical incision was then made in the mid-axillary line, and rapidly deepened until the underlying ribs (5th, 6th, 7th and 8th) were reached. The soft parts were then dissected back until about three and a half inches of each rib were exposed. Portions three and a half inches long of three of these ribs were then excised, the fourth not being removed on account of the patient's feeble condition. To excise the ribs an incision is first made through the enveloping periosteum about four inches long, and the periosteum carefully separated from the bone until a chain-saw can be passed underneath the rib between it and its periosteum. Thus the bone is removed without any danger of wounding the intercostal artery. An incision was made in the 8th intercostal space, giving vent to a large amount of pus. The spontaneous opening in the 2d intercostal space was then enlarged, and a large red rubber drain-

age tube, perforated laterally, was passed from lower to the upper opening, thus securing perfect through-drainage. The chest cavity was then washed out, the wound stitched up, the drainage tube secured in position by safety-pins and adhesive straps, and a very large thick dressing applied. I should remark that Dr. Briddon carried out antiseptic methods most scrupulously during the entire operation Patient suffered from moderate degree of shock, but reaction was brought about by the free use of stimulants and hot applications to the surface of the body. For a few days subsequent to the operation, the usual amount of surgical pyrexia was present. The dressing was changed each day, as it became saturated with pus, and the chest cavity washed out, the nozzle of the irrigator being inserted into the drainage tube for this purpose. After a few weeks the discharge had markedly diminished, as had also the capacity of the pus-secreting cavity. The patient's appetite was good; he was free from fever and gaining flesh and strength. He continued to improve steadily until he was discharged in the spring at his own request. At this time his condition was vastly better than it had been at any time, and he was considered on the high road to recovery.

In a letter from Dr. Briddon, dated March 15th, 1886, he says: "It was my desire to make further resection in his (Sutherland's) case. There is still a fistulous communication with a cavity that contains about four ounces of pus, but the man has wonderfully improved."

At the time of the operation the cavity contained nearly a *quart* of pus. It is therefore highly probable that a resection of two or three more ribs would allow sufficient contraction of the chest to close the cavity existing at present.

This case serves to introduce my subject, and is also very

instructive, as it shows what may be done for a class of cases formerly hopeless.

The process by which cure is effected in empyema must be considered in order to understand the *rationale* of surgical treatment. In an acute empyema, the pleural surfaces are covered with fibrin and pus, and the cavity contains pus, fibrin and serum in varying proportions. The lung is compressed according to the amount of fluid in the pleural cavity, but its structure has undergone no alteration. Should cure follow the removal of the purulent effusion, there is no obstacle to the expansion of the lung, and the patient recovers without contraction of the chest; and, with the exception possibly of a few adhesions between the lung and the chest-wall, the lung is in as good condition as before the attack. Unfortunately such a result occurs very rarely, only in those few cases where cure has followed aspiration of the chest.

In a chronic empyema there is a very different state of affairs. Here the pleura is very much thickened by a production of new connective tissue, and its surface secretes pus in greater or less quantities. The lung, moreover, having been for a long time subjected to the pressure of the pus, has suffered structural alterations. The prolonged compression has produced collapse of the lung tissue, and forced the lung generally into the upper and back part of the thorax. Here it lies totally unable to take part in respiration, and in time becomes reduced to a solid, cake-like mass, bound down by adhesions and incapable of expansion. Hence when the pus is removed from the chest, the lung is unable to expand and fill the vacancy. The process of cure in such a case is by granulation. The surface of the pleura becomes lined with granulation-tissue. As this becomes organized into connective tissue, contraction takes place, approximating

the sides of the abscess cavity. Thus the chest-wall collapses, the diaphragm is drawn upward and the lung drawn downward as much as possible. There is a limit, however, to this contraction, by which the abscess cavity is closed, due to the resistance of the bony chest-wall, on the one hand, and the inability of the lung to expand on the other. Hence, when nature has done her utmost, there probably still remains a cavity containing from a few ounces to a pint of pus escaping by a fistulous opening. This drain is sufficient to cause amyloid changes in the liver and kidneys and end the patient's life. It is in these cases especially that Estlander's operation holds out a prospect of cure.

I will say nothing regarding the medical treatment of this disease. The importance of keeping the patient's strength and nutrition up to the highest point is fully recognized by every one.

The surgical treatment of empyema is somewhat different in children and in adults, the results being vastly better in the former.

I will now take up *seriatim* the different surgical procedures that can be adopted in a case of empyema:

1. *Aspiration.*—Practically, paracentesis was not resorted to as a means of treating empyema until about thirty years ago. To Dr. Bowditch, of Boston, we are indebted for elaborating this therapeutic resource. Since the invention of the aspirator, the trocar and canula are no longer used in performing this operation. With the aspirator one of the chief dangers attending the operation (admission of air to the pleural cavity) has been done away with.

Aspiration is the simplest of the three operations that are performed for curing empyema. It is indicated in all except very chronic cases. It is very rarely curative; but as it is almost without danger, and *sometimes* cures, it is well

worth a trial before resorting to the more serious operation of opening the chest.

Flint, in his "Clinical Medicine," p 112, says: "In a very small proportion of cases pus does not re-accumulate, and the aspiration effects a cure."

Mr. Godlee, of London, reports *fifty* cases of empyema in the *Lancet* of January 9, 1886. Of these *six* were cured by aspiration alone—four of the patients being children, the other two adults. He regards aspiration as much more likely to effect a cure in children than in adults.

After the first aspiration it is possible that the pus will not re-accumulate. In the large majority of cases, however, this result unfortunately does not occur, and the operation must be repeated. If the pus re-accumulates rapidly after each aspiration, and contains more and more cellular elements, the operation is doing mischief, and we should temporize no longer, but at once open the chest and secure thorough drainage.

The 8th or 9th intercostal space in a line with the angle of the scapula is the best place to introduce the needle of the aspirator. Whatever space is selected, care should always be taken to insert the needle near the upper border of the *lower* of the two ribs bounding the space; this precaution is necessary in order to avoid wounding the intercostal artery.

If the patient is very sensitive or nervous, it is well to inject cocaine subcutaneously previous to the insertion of the aspirating needle.

Authorities differ as to the amount of pus which should be removed at the first aspiration, some advising a removal of only part of the effusion for fear of inducing hemorrhage or syncope. Others remove all the pus at one sitting. Thus in one of Mr. Godlee's cases, he aspirated 52 oz. and in another 90 oz. A safe rule is to discontinue the aspiration as

soon as the patient shows any embarrassment of the respiration, any tendency to cardiac failure, or feels an undue amount of pain.

2. *Opening of Chest and Drainage.*—This operation should be resorted to as soon as it is evident that aspiration is not going to effect a cure, and also in cases in which a fistulous opening already exists. In cases of empyema, complicating chronic pulmonary tuberculosis, it is impossible to lay down any fixed rule regarding opening of the chest. Generally it is unadvisable to perform the operation if the tubercular changes in the lung are far advanced. If, however, the pulmonary involvement is slight, the operation may be performed with much benefit to the patient Each case must necessarily be judged on its own merits. The operation consists in opening the chest cavity by incision in an intercostal space, exploring the cavity with the finger and with a urethral bougie, and the introduction of a drainage tube. Here as elsewhere a strict adherence to antiseptic methods during the operation and in the subsequent dressings is of paramount importance.

The incision should be made either in the 7th or 8th interspace with the mid-axillary line as its central point, or a little further back between this point and the angle of the scapula. If the ribs have been crowded very close together, it is best to make the incision upon the 8th or 9th rib, instead of in an inter-space, and to remove an inch or more of the underlying rib. This allows not only better drainage, but a more thorough exploration of the cavity by finger and urethral bougie. Gross speaks of the frequency with which the pus is contained in several cavities. By introducing the finger into the chest, we may be successful in breaking through the adventitious membranes separating different cavities and thus secure drainage of them all. After the

pus has been evacuated through the incision, the question of washing out the pleural cavity comes up. This apparently simple and harmless procedure may cost the patient his life. All authors mention cases in which fatal syncope comes on during the injection, though the cause of death is unknown. Fortunately such an unhappy termination is rare, but from its occasional occurrence we draw this lesson—use a *harmless fluid* and inject with *great gentleness*. The fluid may consist of a solution of salt, borax, carbolic acid (1 to 200) or iodine in tepid water which has been previously boiled. The injection should be given with a fountain syringe, or irrigator, elevated but very little above the patient's level. With this amount of care the danger of producing syncope is reduced to a minimum, and the patient runs much less risk of septicemia than if the cavity is left unwashed.

A large drainage tube (preferably of *red* rubber) should now be introduced through the wound. The tube must go deeply into the cavity, its outer end projecting very little from the wound. It is important to fix it securely in position, for it can be sucked into the chest cavity very easily. The wound is then closed and a thick antiseptic absorbent dressing applied. This will probably be saturated with pus in twenty-four hours; if so, a new one must be applied, the cavity being washed out as before. The drainage tube is to be gradually shortened as the cavity contracts.

Under this treatment the patient may either recover *completely*, or make a partial recovery, there still remaining a fistulous opening leading into a cavity of greater or less extent. In the latter case recovery cannot take place, because contraction has reached its limits, and it is impossible for the cavity to fill up by granulation. It is in such a case that Estlander's operation—resection of portions of several

ribs—is applicable, for this allows the chest-wall to sink in and granulation to proceed.

3. *Estlander's Operation.*—This operation was devised and put in practice by Professor Estlander in 1877.

It consists in the resection of portions of several ribs, and is suited to cases of empyema of long standing, in which there is no tubercular complication.

Professor Estlander, in his paper on the subject (Revue Mensuelle de Medicine et de Chirurgie, pp. 157, 885), lays great stress on the importance of the surgeon making himself thoroughly acquainted with the nature of the cavity and the direction in which its greatest extent lies. This knowledge can be attained by exploring the cavity carefully with a urethral sound. Then the operation is so performed that the longest portions of the ribs are removed from that part of the chest-wall which is most distant from the lung. The necessary number of ribs may be exposed, either by turning back a flap of the soft parts, or by a T shaped incision, or by simply a vertical incision, as in Sutherland's case. Portions of from three to six ribs may be removed, so as to make an oval opening into the chest. The method of excising a rib has already been described.

After removal of the ribs, the intercostal arteries are to be secured by strong ligatures, and then the periosteum may be cut away. If the periosteum is left undisturbed, bone is reproduced from it, and the object of the operation may be thus defeated.

After the operation this portion of the chest-wall sinks in and the cavity is filled up, though a second operation is often necessary to complete the process of cure.

In the *British Medical Journal*, January 23, 1886, p. 157, Dr. Maclaren relates the case of a boy eighteen years old, from whom he excised portions of the fifth, sixth, seventh,

eighth, ninth and tenth ribs for the cure of an empyema of fourteen months' standing, which had been treated in vain by incision and drainage The final outcome of the operation was a perfect cure, though it took nearly two years before the cavity closed entirely.

SURGICAL RELATIONS OF THE GALL-BLADDER TO OBSTRUCTION OF THE DUCTS.*

By J. McF. GASTON, M. D., Atlanta, Ga.

In the eminently practical treatise of Dr. James Johnson, on the liver, many points of importance connected with its pathological relations are presented, and this close observer of clinical phenomena claims that "the consequences of the want of bile in the alimentary canal are truly momentous."

The philosophic work of Murchison sets forth strikingly the effects upon the general system of derangement in the secretory functions of the liver, and the serious results of any interruption in the supply of bile to the alimentary canal.

Legg presents many illustrations of the importance of the bile-producing property of the liver, with the modifications in the digestive process effected by the presence of the bile, and the unfavorable consequences of its absence from the intestines, so that his record of experimentation as to its slight influence upon the animal economy is neutralized to a great extent by the weight of clinical observation. His elaborate and painstaking investigations as to the ends served by the bile in the process of digestion lead to the conclusion that "the only office which remains to it is that of emulsifying fats and of changing starch into sugar." But we are like Galileo, if forced to recant a theory, still con-

*Reported from the Section on Surgery for the Fifth Congressional District.

vinced of the fact that the operation of the bile is essential to intestinal digestion.

Harley states that several physiologists have given it as their opinion that bile is not essential to life, from the fact that animals have lived for many months after the artificial establishment of a biliary fistula, through which bile was allowed to flow away and be entirely lost to the system. Now, he adds, although this latter fact is perfectly true, yet it is at the same time evident that the uses of the bile cannot altogether be dispensed with, for animals with a biliary fistula invariably lose flesh, become emaciated and weak. The hair falls off, the bowels become irregular, while at the same time a great and almost constant discharge of foul-smelling gases takes place from the intestinal canal. At length after a shorter or longer period the animal sinks and dies.

He further remarks that, although bile can convert starch into sugar, its chief office in the digestive process is not so much to act on the amylaceous or albuminous portion of our food as to assist in the absorption of fats.

The study of biliary modifications from clinical observation illustrates surgical pathology much more satisfactorily than any physiological experiments can do, and the views of Bartholow, presented in his elaborate article on "Diseases of the Liver," in the second volume of Pepper's "System of Medicine," are deserving of consideration as bearing upon the great importance of the bile to the process of nutrition. He points out the manner in which "the diversion of the bile interferes in the digestion of certain materials," and holds that "any accumulation of bile in the gall-bladder signifies an obstruction of the ductus communis choledochus." He has frequently seen perihepatitis follow the passage of gall-stones, which may terminate in a week or ten days, but the mischief done may not be limited to the adhesions

formed. "The large quantity of newly organized connective tissue may in its subsequent contraction compress the common, cystic or hepatic ducts."*

He claims that certain conditions on the part of the bile and on the part of the gall-bladder and ducts are necessary to the formation of calculi.

"If the bile remains long in the gall-bladder, the stasis and concentration are essential elements of the accumulation, but there must be some change in the composition of this fluid to increase the quantity of cholesterine, which exists so largely in the gall-stones. When all the conditions favorable to the separation and crystallization of cholesterine are present, any foreign body may serve the purpose of a nucleus. The preponderance in the number of cases of hepatic calculi at or about the fiftieth year is referable to the lessened activity of the nutritious functions at this period, and to the increase in this relative proportion of cholesterine in the blood in advanced life. The gall-bladder is of course the chief site for these bodies, but biliary concretions and masses of inspissated bile may be found at any point in the course of the ducts; spontaneous disintegration of gall-stones sometimes occurs; when, however, the concretions are made up of lime and pigment, their integrity can be impaired only by the process of cleavage; no solvent action can take place; various changes occur in the ducts or in the gall-bladder in consequence of these concretions, as catarrh, ulceration and abscess."†

"The most usual situations for the occurrence of those changes that lead to occlusion by inflammatory adhesions are the beginning of the cystic duct, obstruction of which

*Pages 980, 982, 989.

†Pages 1062, 1063, 1064, and 1066.

is of little moment, and the end of the common duct which finally proves fatal."

"The most usual, and for obvious reasons the most important, of the sites where occlusion occurs is the common duct, and at the termination of the duct in the small intestine, the intestinal orifice."

"The effects of obstruction are much less important when the cystic duct is closed. The contents of the gall-bladder accumulate, constituting the condition known as dropsy of the gall-bladder."

"The results are far different when obstructions occur in the hepatic or common duct, for there the bile can no longer perform its double function of secretion and excretion—of contributing materials necessary to digestion and assimilation, and excreting substances when removal is necessary to health. The liver, continuing to functionate after closing of the duct is effected, obviously the secretion of bile continues to accumulate, and the irritation of the mucous membrane causes a catarrhal state; mucus is poured out and serum escapes from the distended vessels."*

"A significant change in the color of the stools takes place. They lose their normal brownish-red tint and become yellowish and clay-colored, or white, pasty and grayish. Sometimes the stools are very dark, tar-like in color and consistency, or more thin like prune juice, or in black scybales. The most usual appearance of the stools in occlusion is grayish, mush-like and coarsely granular. The very dark hue assumed at times or in some cases signifies the presence of blood."

"When the occlusion is partial, although it may be permanent, sufficient bile may descend into the duodenum to

*Pages 1083, 1084, 1085.

color the stools to the normal tint, and yet all the other signs of obstruction be present."

The most important result of the action of the bile on the constitution of the blood is the hemorrhagic diathesis. Soon after the occlusion occurs in very young subjects, at a later period in adults, the disposition to hemorrhagic extravasations and to hemorrhages manifests itself. This morbid state of the blood is accompanied by changes in the kidneys and in the composition of the urine, a peculiar form of fever known as hepatic intermittent fever, and a group of nervous symptoms, to which has been applied the term cholæmic, due to the presence of biliary excrementitious matters in the blood, and not less to the effect on nutrition of the absence of bile from the process of digestion in the intestines.

The great fact dominating all other considerations is the stoppage of the bile; whether it has occurred suddenly or slowly, jaundice begins in a few hours after the canal is blocked. At first there is yellowness of the conjunctiva, then diffused jaundice, deepening into the intensest color in two or three weeks, but this gradually loses its bright appearance, grows darker and passes successively into a brownish, bronze-like and ultimately a dark olive green, which becomes the permanent color. In a few instances, after some weeks of jaundice, the abnormal coloration entirely disappears, signifying that the liver is too much damaged in its proper glandular structure to be in a condition to produce bile.

Pruritis, sometimes of a very intense character, accompanies the jaundice, and the scratching sets up an inflammation of the skin, and presently a troublesome eczema is superadded. According to the stage of the disease, the liver will be enlarged or contracted; and whilst the liver shrinks in size, the gall-bladder remains enlarged and projects under the surface of the organ, elastic, globular and distinctive.

Whether the liver be enlarging or diminishing, its functions are impaired, or indeed entirely suspended, and gastro-intestinal disorders follow.

The following cadaveric demonstration of the changes in obstruction of the common bile-duct may interest the reader:

This patient died with obscure symptoms of occlusion in the outlet for the bile, and the exposed gall-bladder was somewhat elongated and dilated beyond its natural proportions.*

In all cases of supposed obstruction of the gall-duct, it would be proper to ascertain the practicability of effecting a passage through the natural channel before proceeding to make an artificial communication. If an effort to expel the fluid from the gall-bladder by compression proves ineffectual in cases of distension, it may be evacuated by a trocar, having a flexible tube so as to convey the bile or other fluid outside of the peritoneal cavity, when an incision through its walls will admit of the use of the finger for exploration. I then proceeded, without such preliminary steps, to incise the wall of the sac, that yielded a dark liquid, flowing out slowly, and it was more consistent than the natural bile, and hence it was inferred that it had remained beyond the ordinary period so as to become inspissated. Upon passing my finger within its cavity, no gall-stones or other solid matters were found, and I now attempted to pass a silver probe into the cystic duct, but could discover no outlet where it should exist. An examination of the duodenal extremity of the common duct was next made, and I found the hardened termination of the duct, but no opening into the duodenum could be discovered. Upon passing my finger along the line of the common duct and the cystic

*Autopsic lecture reported in the Southern Medical Record, March 20th, 1885.

duct, this imparted a cord-like feeling to the touch, giving the conviction that the channel throughout its whole extent was entirely obliterated, so there was complete occlusion of the natural communication from the gall-bladder to the duodenum.

If our subject were alive and presented similar pathological conditions, it is most likely that an artificial outlet for any collection subsequently in the gall-bladder would avail for the relief of this trouble, yet there could be no discharge of bile without opening the cystic duct. This being practicable, while obstruction of the common duct remains, I proceeded to demonstrate the mode of uniting the gall-bladder and duodenum with a view to secure an outlet for the bile. I selected the upper portion of the duodenal wall opposite the entrance of the bile duct, and pinched up with my thumb and forefinger a small doubling of the tissues which was transfixed with the curved needle, armed with a silk thread.

As was seen, this surface of the duodenum lay in close proximity to the lower and posterior surface of the gall-bladder, so that pinching up its wall in the same manner, the needle with the ligature was also carried through its tissues, and drawing the two ends of the ligature, it was evident that it passed into the cavity of each to a very slight extent. The ligature being now freed from the needle, the outer surfaces of the duodenum and the gall-bladder included within the loop of thread were thus brought into immediate contact, and they were secured together by knotting the loop in such a manner that the knot should press upon the duodenal wall. This apparently trivial step is indicated to insure the passage of the loop into the cavity of the duodenum when it has cut its way through the conjoined tissues. The ends were now cut off close to the knot, and

we observed that it lay imbedded as it were in the wall of the duodenum, thus favoring the passage of the ligature into this canal rather than into the cavity of the sac.

In my first experiments on dogs for effecting this junction, a circular row of catgut stitches was made to connect the serous membranes around the ligature connecting the gall-bladder and duodenum, under the impression that this would be requisite to effect the necessary adhesive inflammation between their surfaces. But it was evident that undue inflammatory action resulted from this process, and by observation of the effects in my last experiment on the dog, it was found that sufficient adhesive inflammation followed the insertion of a single ligature, so that the proceeding of stitching the surfaces around this ligature is not desirable in any point of view.

In so far, then, as this operation is intended to effect an opening from the gall-bladder into the duodenum and to unite their outer walls around this orifice, nothing further is needed than the passage of a single silk thread and knotting upon the wall of the duodenum, as was done in this case. With the assurance that this ligature shall cut an opening between the gall-bladder and the duodenum in a brief period, we may then close the incision made in the sac with the continuous glovers suture separate from the abdominal wall, and close the external wound with the interrupted suture.

I am so fully impressed with the prospect of a favorable result from ligation of the sac with the duodenum, to effect an outlet for the bile in cases of retention from the obstruction of the common duct, that it will be put into execution on the living human subject whenever an occasion offers.

With a view to act understandingly as to the diagnosis of such a case, let me state that all tumors connected with the

liver should be carefully examined. I have at the present time under my observation two cases recognized as enlargements of the left lobe of the liver and of the pancreas, one being under my own direction and the other under the care of a colleague in my private surgical infirmary, which occupy almost the entire epigastric region, extending nearly to the umbilicus. As these are more or less indurated, they could not be mistaken for the distended gall-bladder. But in the event of an abscess forming in either, to the right of the median line, the diagnosis would be attended with great difficulty, and any purulent collection in the parenchymatous structure of the liver, when it extends below the margins of the ribs on the right side, is liable to be mistaken for a distended gall-bladder, or, on the other hand, the enormous proportions of the dilated sac may lead to the erroneous diagnosis of hepatic abscess. In the event that it extends down into the iliac region, as the dilated and elongated sac in dropsy of the gall-bladder has been known to do, it might be taken for an enlargement of the ovary with fluid contents, and in such cases great caution is requisite in the diagnosis.

The history of a case, in its gradual progress and increase of dimensions, with the oblong outline proceeding from beneath the ribs on the right side downwards, will materially aid us in determining whether the gall-bladder forms the tumor or not. If, along with the local signs, there is evidence of obstruction of the common duct in the absence of bile from the fœcal evacuations, it will still further strengthen the presumption in favor of an accumulation in the gall-bladder.

This collection in the sac may be a disorganized biliary fluid, a dirty dropsical effusion, a clear mucus, a sero-puru-

lent matter, or inspissated bile, with or without concretions in the form of gall-stones.

The element of fluctuation does not avail for a differential diagnosis, as it may exist in an abscess of the liver, in urinary infiltration from rupture of the ureter, or in an ovarian cyst, as well as in fluid accumulations in the gall-bladder There may be also a semi-fluid accumulation of inspissated bile or a mass of doughy consistence from partial solidification of the biliary matter in the gall-bladder, which impart no sense of fluctuation, thus obscuring very much the indications from obstruction of the bile-duct; but a simple and easily-applied test for any fluid collection in the gall-bladder is the absence of any well-defined induration around the outline of the tumor, and the continuous extension of the soft mass beneath the cartilages of the false ribs on the right side. If the fluid or pultaceous matter occupies the cavity of the sac, however much it may be dilated and extend downwards, it must necessarily reach up under the liver, which does not protrude below the line of the costal arch unless enlargement of the organ exists, and hence the ability to trace the fluctuation upwards under the margin of the liver becomes an important diagnostic of a fluid accumulation in the gall-bladder.

A series of experiments on dogs, intended to show the aim and end of this process for connecting the gall-bladder with the duodenum, appeared in the *Atlanta Medical and Surgical Journal* for September and October, 1884. I have preserved some specimens illustrating the fistulous communication between the gall-bladder and duodenum by the cutting through of the elastic or silk loop which united their walls, and the firm surrounding adhesions of their surfaces, from the inflammatory action set up in their serous membrane. One of these specimens was taken from a dog

which died on the fourteenth day, and with the handle of the scalpel passing through the extirpated wall of the gall-bladder that is laid open so as to expose the cavity, we see the slit in the septum formed by the agglutination of the two walls, resulting from the action of the elastic ligature.*

Another specimen shows a similar opening between the gall-bladder and duodenum in a dog which died on the eleventh day, the ligature having passed away in the intestinal canal after cutting through the tissues.

I have a recent specimen of the entire liver, gall-bladder and duodenum that was removed from a dog which died from the inhalations of sulphuric ether on the 4th of February, 1885, while I was making an exploration of the results of my experiments done the 20th and 28th of August, 1884. For five months this animal had been well and sprightly, after being subjected, in the first instance, to laparotomy and attachment of the walls of the gall-bladder and duodenum with a single silk thread, and eight days subsequently, a second laparotomy for the verification of the union of the two surfaces and the opening between the two cavities. The final examination of this animal was to ascertain the condition of these parts, after the lapse of such a length of time, with the intention of replacing the ligature if the orifice had become obliterated in the septum

This cutaneous wound was closed by the hair-lip suture, with needles passing so as to include the peritoneal membrane, for the purpose of testing this mode of closing the external wound. It was somewhat doubtful about the parts being held together by the silk thread passed through so small a portion of the walls of the gall-bladder and duodenum in the experiment of the 20th of August, 1884, but the examination on the 28th satisfied us not only that their ex-

*The ligature was found loose in the gall-bladder.

terior surfaces were adherent, but that a free communication between their contents had resulted from the action of the suture.

On the 1st of September, 1884, the close jacket, which had been kept on constantly, was removed, and the needles were found loosened by cutting the tissues, but there was complete union of the lining membrane and adjoining structure, so that it was not found necessary to use any means for approximating the gaping wound of the integuments. A compress of old soft cotton cloth, soaked in carbolized oil, was bound over the external wound, and the jacket was re-applied. This jacket of strong cotton drill was at the outset sewed securely around the body of the animal, with straps securing it in front of the breast and behind the quarters, so that no slipping forward or backward could occur. In this way the wound was effectually protected from the mouth of the animal, which had been productive of such serious consequences in some of the other cases.

Attention should be directed to a material difference in the management of this case from the course pursued with the others, in sewing a jacket around the body at the outset, thus preventing any interference with the suture, that was torn out repeatedly by most of the other dogs, and the cavity of the peritoneum was exposed, while on several occasions the viscera protruded from the abdominal wound. The animal of the last experiment was on each occasion kept under my personal supervision, and supplied with food and water regularly from the beginning to the end of the traumatic phenomena. The inference from these facts is that the fatal results in the other experiments were owing to the lack of proper precautions in the subsequent treatment, and due likewise to the circular row of stitches around the stitch that united the walls of the gall-bladder and duodenum, which

is proven to be unnecessary as well as hurtful. To make this demonstration more satisfactory, it is proper to point out the various steps taken in the first and last operations on the dogs, as presented in the record of the cases.

August 9th, 1884, *Case No.* 1.—A young dog was placed under the anæsthetic influence of sulphuric ether and operated upon by making an oblique incision through the abdominal wall about an inch below the costal arch on the right side, extending about six inches backward from the median line. The gall-bladder, being situated more deeply under the liver than in the human subject, was reached with some difficulty by one assistant holding the liver up, and at the same time drawing it out, while another, with his fingers, pressed down the stomach, pancreas and meso-colon. Having brought that portion of the duodenum opposite the entrance of the ductus communis choledochus into close proximity with the gall-bladder, a needle, having the form of a fish-hook and armed with an elastic ligature, was passed through the most salient portion of the wall of the sac and then carried through the wall of the duodenal canal so as to include nearly half an inch of their respective surfaces. The cord, including their tissues in a single loop, was tightened so as to embrace both walls closely, and knotted firmly. A finer needle of similar shape, armed with a delicate catgut thread, was used to attach the surrounding serous surfaces by a circular line of continuous suture, with the expectation of insuring their union by adhesive inflammation Thus, while the elastic cord shall cut its way through the approximated walls of the gall-bladder and the duodenum, so as to form a communication between them, adhesions between the surfaces around this fistulous opening shall prevent any escape of the contents into the peritoneal cavity. The lining membrane of the abdomen was

closed with a continuous catgut suture, while the external wound was united by interrupted suture with strong silk thread. This animal took beef soup thickened with corn-meal during the following day, and drank water in moderation, so that on the 11th of August all seemed to be progressing well locally and generally.

On the 13th a single stitch of the interrupted suture had given way at the posterior extremity of the incision, but as there was no gaping of the wound it was not thought necessary to replace it.

August 23*d.*—After sundry serious alternatives, this case died about noon, and the autopsy was made with the presence and assistance of two colleagues, revealing the fact that the external incision was not closed at all points, while the peritoneal membrane seemed to be united completely throughout the whole extent of the incision. Upon dividing the tissues, the catgut of the continuous suture was so strong as to resist a considerable strain in drawing upon it, though fourteen days had elapsed since the operation.

Upon entering the cavity of the abdomen, there appeared to be extensive peritoneal inflammation with considerable serous effusion, and in exploring the posterior right hypochondriac region, a large abscess was found involving the substance of the liver. Extensive adhesions existed amongst the viscera, accompanied by enlargement and degeneration of the gall-bladder, so that it had become the medium for agglutination of different parts with the liver. In separating these the cavity of the gall-bladder was explored, and the well-knotted elastic ligature was found within it, adjacent to a fistulous opening into the duodenum. The small opening leading from one to the other illustrates the action of the suture, while the firm union around it, forming a septum

between them, manifests the adhesion caused by the catgut stitches. The extension of inflammation to other parts might have resulted in part from the traction upon the liver at the time of the operation, but it was evident that the circular row of stitches in the peritoneal surfaces had set up an undue excitement, which should be obviated by dispensing with this mode of union in future.

To illustrate the marked difference of varying the procedure, the notes in the last case, No. 6, of this series of experiments may prove instructive to the reader.

August 20th, 1884.—In the afternoon a young bitch of the small breed of dogs was operated upon under the influence of ether in the presence of two colleagues. An incision below the right costal arch, of two and a half inches in length, enabled me to pass a suture of doubled silk thread through the walls of the gall-bladder and duodenum, including a very small portion of tissue in the loop, by which they were bound together, with the knot pressing upon the duodenal wall. A single silk thread was used to close the peritoneal incision by the continuous suture, and also to unite the external cutaneous incision by the interrupted suture. There was some oozing of bile-stained serum from the wound that night and next morning, but it ceased from that time forward.

On the 28th of August,* case No. 6 was etherized and the line of the former incision through the abdominal wall was laid open, it having closed completely by first intention. It was verified by a colleague that the walls of the gall-bladder and duodenum adhered around the point where the doubled silk thread had been inserted. It was inferred also, from the small quantity of bile in the sac, that the opening between their cavities was fully established, but the demonstration

*It will be noted that only eight days had elapsed after the first operation.

of this fact by laying open one or the other was not resorted to on account of the risk from such incisions. I had expected on this occasion to ligate the common bile-duct with a view to turn all the bile into the gall-bladder, and thence through the fistulous opening into the duodenal canal. But the adhesions of the duodenum over the line of the duct prevented it, and the main points of interest being the union and communication between the sac and the canal, became established by this exploration.

In view of the supposed practicability of making an immediate communication between the gall-bladder and duodenum, I have recently resorted to a process which seemed to promise better results, but with fatal results to the dogs in a brief period. As some other surgeon may adopt this recourse in the human subject on a fitting occasion, I may state that the gall-bladder was secured, in contact with the duodenum, by a loop of silk thread, and the doubling of each wall adjacent to this stitch was perforated by excising its tissues with a shoemaker's punch, thus leaving a round hole, whose margins were united by a continuous catgut suture, admitting of the flow of the bile from the gall-bladder directly into the duodenum.*

In one of these cases the common duct was left open, and yet the subject died within thirty-six hours, while, in the other two, having this duct ligated, the animals did not live twenty-four hours after the operation. Both of these latter cases gave indication of yielding of the stitches under the strain upon the tissues of the gall-bladder and external discharge of bile into the peritoneum, instead of passing into the duodenum, as was intended, and it is inferred that the contractile tissue of the duodenum closed the

*Removal of tissue by the shoemaker's stitch may succeed better than the punching process when delay is admissible.

orifice made by the punch in the walls, though no agglutination was found at the autopsy.

There is, of course, a departure from the normal state in the delivery of bile continuously into the duodenal canal,* instead of the physiological process of retention for certain periods in the gall-bladder and being poured out as it is required for the intestinal digestion; yet, it is a fair inference that under the transformation of the bile-producing function of the liver, the discharge will adapt itself ere long to the natural demand for it. At least this is the nearest approach to the normal supply of the biliary secretion that can be provided when the ordinary outlet is occluded, and certainly fulfills the aims and ends of its production more satisfactorily than to create a cutaneous fistula for its escape externally.

There is no assurance of final and complete recovery with such abstraction of the bile from the alimentary canal as results in the diversion of it from its appropriate destination, which effectually excludes it from performing its office in the intestinal digestion of the food.

It is not improbable, however, that in some cases of temporary stoppage of the gall-duct, either from concretions or hardened mucus, there may follow inflammation of its walls without adhesion, and that the evacuation of the contents of the sac will relieve the swelling and turgescence, so that the canal may be restored and serve to convey the bile into the duodenum. Should this not occur spontaneously, it is proper, under some circumstances, to evacuate the distended gall-bladder externally, with a view to establish a fistulous external outlet until the natural discharges can be secured either from subsidence of the inflammation or by

*Diseases of the Liver, by Harley, page 70.

catheterization of the tract from the gall-bladder into the duodenal canal. Under such favorable conditions the external opening may be closed, and the waste of bile would be obviated, thus relieving this procedure of a most serious objection as a radical operation in permanent obstruction of the gall-duct.*

It is requisite for the successful result of an operation that a communication with the alimentary canal shall be effected, and when the gall-duct remains impermeable an artificial connection of the gall-bladder with the duodenum affords a passage for the bile and thus relieves all the embarrassments of the situation.

The claim for cholecysto-duodenal communication must rest largely upon the importance of restoring the bile to the system instead of discharging it externally and thereby losing its influence upon digestion and assimilation of the alimentary mass.

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*Lancet, September 5th, 1885, Lawson Tait.

REPORT ON PRACTICE FOR THE SIXTH CONGRESSIONAL DISTRICT.

EXANTHEMATOUS OR ERUPTIVE FEVERS—A HYBRID OF MEASLES AND SCARLATINA.

By W. O'DANIEL, M. D., Bullards, Ga.

In the months of February, March and April of the present year (1886), we were in the midst of an epidemic of what we finally diagnosticated a hybrid of measles and scarlatina for want of a more appropriate name. During this epidemic of exanthematous fevers, we saw cases, even in the same family, which were so very different in appearance that they could have been upon good medical text-book authority, considered distinct diseases. In corroboration of this, physicians of equal experience and ability did disagree in diagnosis, some believing this very peculiar form of hybrid exanthemata to be rubeola, some roseola, while others contended that it was scarlatina.

In many of the severest forms of this disease the characteristic symptoms were not sufficiently well marked as to preclude doubt as to the correct diagnosis

We saw about one hundred cases, including relapses or second attacks, of this disease, a very large number of which were so mild in form as not to require treatment at all, while others were quite virulent, and took on threatening complications of bronchitis, laryngitis and a few pneumonitis.

One of the most noted peculiarities and remarkable features in these cases was the common tendency to second attacks or relapses, which occurred sometimes during the period of convalescence, and sometimes after, we thought, patients had good recoveries.

We saw second attacks after intervals of from four to nine weeks after first attack.

The disease was contagious and self-limited.

We remember one family of six children, whose ages were from seven to eighteen years, and every one of them had a second attack, some of them after apparently perfect recoveries from the first attack.

The eldest of these six children had a second attack, after an apparently good recovery, ten weeks from first attack, in a most malignant form, complicated with bronchitis, laryngitis, and finally broncho-pneumonitis, but, after a long and tedious combat with these complications, recovered, and is now in good health.

We say second attack, because we deem it more appropriate than relapse, in this particular epidemic, as many of the cases, to all appearances, had permanently recovered from first attack, and, without any exposure or perceptible reason whatever, were again stricken down. Generally, if first attack was violent, the second would be light, and *vice versa*. Had not the characteristic symptoms in many cases been identically the same, we certainly would have concluded that we were dealing with two separate and distinct diseases of exanthemata.

Adults and nursing babes, as a rule, were insusceptible, with few exceptions. We did, however, know three ladies, between the ages of twenty-four and thirty years, to contract the disease, one of whom was said to have had measles before.

We never knew, with absolute certainty, a single case in an individual, who had had an undisputed case of measles previously. This being the case, we called it measles, but in a different form from regular cases; hence, the hybrid conclusion.

While rubeola is a synonym for measles, we have been impressed lately with the careful discrimination of some distinguished English writers, in employing this term only when there was a blending of measles and scarlatina. In this epidemic we have seen cases when the blending really seemed apparent, because of the desquamation glandular enlargements and even abscesses, which are known sequelæ in scarlatina maligna, but were not so extensive as in regular cases of scarlatina.

The general symptoms of measles were in most instances manifest. Stage of invasion, eruption, catarrh, intolerance of light, coryza, impaired appetite, pain in head, frequent rigors, cough, chilly and aching sensations, etc.

The dark red spots (which in severe cases become confluent) always disappear on pressure, but immediately recurring after removal of pressure. The eruption generally appeared on the fourth day, but sometimes later, and in two or three instances during the epidemic through which we have just passed, we saw "*rubeola sine eruptione,*" while other prominent symptoms were present. In violent cases, when the temperature reached its maximum, and while patients were sleeping, we frequently had incoherent mutterings, mental disturbances and *partial* delirium, but when aroused mental equilibrium was restored.

This condition gradually passed off with the decline of temperature. The temperature of apartments in which patients, sick with measles, were confined received *special* at-

tention. While they were well ventilated, we constantly endeavored to prevent draughts.

It is unwise to keep patients suffering with measles too warm. They should be comfortable, but neither too warm nor too cool.

We resorted to frequent sponging of the body with tepid water, much to the relief and comfort of patients. We did not interdict the use of cold water when necessary to allay thirst, but advised against ice and cold applications *externally* for fear of increasing bronchial irritation and cold, and thereby increase the chances for pneumonia, which are very dangerous complications in measles, which, without complications, is very rarely fatal.

We passed through this epidemic with but one fatal case, and that was a little boy about nine years old, and this because of broncho-pneumonia supervening.

As regards treatment, we will say a very large number of uncomplicated cases required little or no attention, save proper hygienic measures, a well regulated diet, and anodynes to promote rest and quiet cough.

When necessary to move bowels, we only advised saline cathartics, unless there were serious malarial complications, when we prescribed small doses of saccharated calomel, followed, if necessary, with epsom salts or cascara cordial, always guarding against excessive purgation.

To palliate and lessen the febrile excitement, we found small doses of the tincture of aconite root, or tincture of digitalis, very efficient remedies; also fluid extract of gelseminum and sweet spirits of nitre.

In some cases quinine was clearly indicated and proved beneficial in reducing the temperature. Carbonate of ammonia is a valuable remedy, and good whisky and milk "play a full hand" as a stimulant and supportive when necessary.

In the tonsilitis and laryngitis of measles we applied spirits of turpentine locally and advised the following:

℞. Acid carbolic.....gtt. xl.
Glycerine.. ....f℥ ij.
Aqua distil..... .....f℥ vj.

M. Sig. Use as a gargle.

For cough:

℞. Syr. senega.
Syr. scillæ, aa.....f℥ ij.
Tr. opii camphorat.....f℥ vj.

M Sig. Dose, teaspoonful *pro re nata.*

This report has special reference, and is confined to cases in my own practice during the epidemic before referred to. The most remarkable feature was the tendency to second attacks. Of course relapses in measles are not at all uncommon, but there is generally an assignable cause for these relapses, which in this epidemic was not the case, but second attacks seemed a mere coincidence.

REPORT ON SURGERY FOR EIGHTH CONGRESSIONAL DISTRICT.

EXSECTION OF A PORTION OF THE RADIUS FOLLOWED BY PYÆMIA AND RECOVERY.

By SAMUEL C. BENEDICT, M. D., Athens, Ga.

On November 22, 1884, Mr. J. A. Clarke, of Anniston, Alabama, a student of the State University, presented himself to me for treatment.

Upon examination I found over the right radius, four inches from the radio-carpal articulation, and on the outer side on supination, a fistulous opening, discharging a thin, watery pus, and in but very small quantity. The opening was surrounded by a peculiar teat-like elevation; the parts around were free from inflammation, congestion or pain. The history given me was as follows:

During the summer of the same year (1884), his arm at that place had been caught in a gate, but the injury was not of sufficient severity to give him any trouble or even to bruise the soft parts. A month or so afterwards and when he had forgotten the injury received by the gate, there appeared on the right forearm a small red point attended by some pain. He applied to a physician for relief; the place was poulticed and soon a discharge was obtained with rapid relief of all the unpleasant symptoms, and with a belief that the "boil," as it was called, would soon be well. In October

he entered the university, and as the wound continued to discharge, he applied for relief and was again treated for a "rising" after the usual routine style. This soon made a painful, tender arm and he dropped the treatment.

When he came to me a month or so later, he was not able to use the arm, in writing, for any length of time, and as it interfered with his collegiate duties he had again sought assistance. The fistulous opening and the discharge were characteristic of bone injury.

Upon passing a probe to the radius, I found a single rough-edged cloaca, leading to the center of the bone, where there could be distinctly felt a segnestrum and partly movable. I stated to him the character of his injury, and that an operation would have to be made upon the bone before he could be relieved. A few days later I made an incision two inches in length and down to the radius for the purpose of getting the exact condition of the bone. I found it enlarged, firm, dense, and with but one opening to the segnestrum—a condition that would require a much more extensive operation than I had expected or was prepared to make without more skilled assistance than I could command. I advised him to go to Augusta for the operation, and after consulting with his parents it was decided so to do. On December 17, and at his request, I accompanied him to Augusta, for the operation, which was to be made by Dr. Des. Ford. On the next day, December 18, at noon, the operation was made, before the class of the medical college, by Dr. Ford, assisted by Dr. Wright and myself. Ether was used as the anæsthetic.

Esmarch's bandage was applied from the hand to above the elbow and a bloodless operation obtained, and under all antiseptic precautions. Upon cutting down upon the radius, it was found impossible to remove the segnestrum by any

means than those of exsection; this was done by the chain-saw, a piece of the bone two and a quarter inches in length being removed. The periosteum of course was left. The edges of the incision were brought together by sutures and the arm placed upon a splint.

The result of the operation was most satisfactory, being quickly and skillfully performed, the patient taking the anæsthetic kindly and feeling remarkably well after regaining consciousness.

He was able to walk to the carriage and was conveyed to the hotel without any trouble. Everything promised well for a good result, and we hoped to return to Athens the following day.

Within six hours after the operation, the arm began to swell, the temperature rising very rapidly and with delirium. By 10 o'clock p. m. we had to contend with that most terrible of all sequelæ of surgical operations, pyæmia. For six days and nights he lay delirious and his life was despaired of. The arm rapidly enlarged so that the stitches and bandages had to be removed. Phlegmanous erysipelas with extensive purulent infiltration to the shoulder, and gangreen of the tissues around the wound with deep sloughing, were all present. The periosteum that was left came away. Consultation was held and the advisability of amputation was discussed. It was decided, however, to trust for recovery to his remarkable vitality, and right grandly did it respond.

With close nursing and treatment night and day, and the most rigid attention to antiseptic cleanliness, on the sixth day his consciousness began to return, the fever to subside and the arm to grow smaller.

On January 1, 1885, thirteen days from the day of the operation, he seemed to be sufficiently strong to stand the removal

to Athens. He was placed on a cot and mattress, put into a baggage car of the Georgia Railroad and safely and easily removed. From January 1st to 13th, he was confined to his bed, and although every attempt was made to keep the divided ends of the radius below the surface of the wound, it was found impossible. The periosteum had slipped away from them and each end was necrosed. For two weeks pus was passing down the arm subcutaneously and escaping below the elbow through an opening made by a slough. On February 15th, the end of the lower fragment was removed by forceps and scissors and by compression the healthy, granulating end restored somewhat to its natural position. On March 13th, I put a plaster cast upon the arm, leaving a waxed opening for the escape of pus from the end of the upper fragment. On the 16th of the same month, and three months after the operation, he left for his home, having fully regained his weight and health, but with a weak and apparently useless arm. In April he sent me a small piece of necrosed bone which he had removed from the upper fragment. All of these pieces I have here to show you, as also a photograph of them and of the arm taken in May, 1885.

The after-result of this case has been indeed most satisfactory.

In June, 1885, all discharge ceased and he went to Poughkeepsie Business College, finishing his course there and obtaining a position as book-keeper on the Texas and Pacific Railroad at Dallas, Texas, which position he still occupies.

He is able to use his arm for many purposes, and as to how well he can write with it may be seen from the letter which I show you.

Now the questions arise to all of us: What caused the blood poisoning? Was it due to Esmarch's bandage?

CASE OF OVARIAN CYST RELIEVED BY ABDOMINAL DRAINAGE.

Miss Ann G., æt 34, has for sixteen years had an enlargement of the abdomen by fluid. She has been tapped twenty times, and for the past six years at least twice a year, and with not less than fifty pounds of fluid at each tapping. I have myself relieved her seven times, and on one occasion obtained ninety-six pounds of fluid.

The tumor is distinctly ovarian, and arises from the right ovary. After passing the trocar through the abdominal walls, it is necessary to go through the more tense wall of the cyst before getting a flow, and as the tumor subsides the point of the canula is carried downwards by the settling of the sac. Sometimes it has been necessary to puncture the cyst two or three times before its contents are withdrawn.

Now, it occurred to me in the spring of last year that possibly I might be able to keep the canula in the ovarian sac and so get a permanent drainage. She consented to let me try.

I had two rings of silver fastened to opposite sides of the canula at its heel, and for the purpose of fastening tape to, which I proposed passing around the abdomen to retain the canula in place.

To the heel or shoulder end of the canula I also fastened a rubber tube three feet long, and in it made a small incision for passing the trocar when about to make the puncture. This was made about half way between the umbilicus and the pubis and a little to the right of the linea alba. After penetrating the abdominal walls, I passed the trocar upward in order to reach a point high up on the cyst, so that as the sac subsided the canula would be less likely to be pulled out. After withdrawing the trocar, and when the flow had become established, I slipped a glass tube, one inch in length, up to the incision in the rubber tube and on the inside, and

to it I bound the rubber in order that there might be no leakage. The fluid then passed directly from the cyst along the tube to a tub, and rapidly.

At this operation I obtained ninety-six pounds of a greenish, straw-colored fluid, gummy and coagulable. The abdomen was firmly bandaged, the canula and rubber tube being left in place. To the end of the tube I attached a small flat bottle, which she carried either in the pocket or fastened to her right limb when in bed. For twenty-six days this drained away from one to two gills a day.

She rapidly diminished in size, the superabundant tissues in the abdominal wall being quickly absorbed. She was in better health than she had been for years; a menstrual epoch occurred, and for the first time in years. Everything promised well for the experiment, when one night she got her foot into the tube and pulled the canula from the abdomen.

I tapped her again in January last, nine months after the withdrawal of the canula, getting this time but forty-five pounds of fluid. She said that she had been in better health than for a long time, and that the cyst had filled less rapidly than for ten years.

The reason why I did not make a second attempt at drainage was that I did not have the instrument with me and the demand for instant relief from dyspnœa was urgent.

Now, can some one suggest a means by which the canula may be more firmly attached to the inner surface of the cyst walls? Might the result not be obtained by using a larger canula and introducing a drainage tube through it into the cyst, or by intruding, after the withdrawal of the trocar, a couple of flat silver pieces which would spring out after being released from the end of the canula?

Would the increased size of the canula increase the danger of peritonitis?

ANTISEPSIS IN OVARIOTOMY AND BATTEY'S OPERATION.

SEVENTY CONSECUTIVE CASES—SIXTY-EIGHT RECOVERIES AND TWO DEATHS.

By ROBERT BATTEY, M. D., Rome, Ga.

Since my last report of this series of cases, made to the Association two years ago, the number has increased to seventy. The method followed has been essentially the same as heretofore. I have continued to use the carbolic spray, to immerse my instruments and sponges in solutions of carbolic acid of strength 1 to 40, the pedicle tied with carbolized silk, the abdomen closed with sutures of the same material. In all the cases the abdominal incision has been used in the *linea alba.* These cases have all been treated in my private infirmary.

Case 31—Double Ovariotomy.—Married, age 35, six children and several miscarriages, the last in February, 1884, at six months, of twins, after which she observed the tumor in the lower abdomen. When I examined her, the 22d of May, the tumor had made rapid growth since February. The abdomen projects strongly forward. The tumor, which is freely movable, is very irregular in outline, and knobby, but fluctuates distinctly. The uterus, behind the tumor, far back in the hollow of the sacrum, is freely movable. She thinks the tumor first appeared in the right side. She

is thin in flesh and the pulse is small and rather irregular; appetite good; bowels normal.

Operation 29th of May, 1884.—Present, Drs. H. H. Battey, West and Dozier, Glover (M. S) and Mrs. Battey. Opened the abdomen five inches, emptied one cyst with the trocar; several secondary cysts were incised and the gelatinous contents turned out Extensive omental adhesions, otherwise free. The pedicle, long and broad, sprang from the left side, ligated in two parts and dropped. The right ovary, being also cystic, was ligatured and removed with a cyst of the parovarium. The abdomen contained a pint and a half of ascitic liquid. The omentum required several ligatures. The incision was closed throughout with carbolized silk. Patient was put to bed, in fifty-five minutes from commencement of the ether, in good condition with but slight shock. The stomach behaved well. The sutures were removed on the fourth and fifth days. The wound was dry and well united

The maximum pulse 110 and the maximum temperature 100.5 degrees occurred on the afternoon of the first day. She sat up on the fifteenth day and returned home on the twenty-ninth day.

Case 32—BATTEY'S OPERATION.—Married, age 34, no children, two miscarriages, last one five years ago. Suffered with uterine troubles for twelve years. For five years she has been a confirmed invalid, and three years of this time entirely bed-ridden. She was two years under constant uterine treatment, with improvement the first year, but none the second. She complains especially of the spine and ovaries. The uterus is in good condition, and in proper position, but the ovaries are both prolapsed and very tender. These organs have always been tender and the seat of pain.

Operation 31st of May, 1884.—Present, Drs. H. H. Battey,

West, Glover (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions. Abdomen opened one and three-quarter inches, both ovaries removed. The right ovary contained a hæmatic cyst which ruptured in removal; left ovary very small and shriveled, contained recent *corpus luteum*, several small, thin-walled, parovarian cysts with pellucid contents, were removed. She was put to bed without shock and in excellent condition. For three days there was considerable nausea and occasional bilious vomiting.

Sutures were removed on the third, fourth and fifty days. The maximum pulse 88 and maximum temperature 101.2 degrees occurred on the afternoon of the second day. She sat up on the fifteenth day and returned home on the twenty-seventh.

Case 33—SINGLE OVARIOTOMY—DEATH.—Widow, age 61, eleven children. She observed the abdomen enlarging near two years ago. In March, 1884, she consulted Professor Westmoreland, of Atlanta, who tapped her, removing eighty ounces of liquid, and advised against ovariotomy. She entered my infirmary the 3d of June, larger than before the tapping. The abdomen is uniformly distended with a compound cyst, which fluctuates freely, with considerable solid material about the base. The abdominal wall moves freely over the tumor, which can be lifted a little out of the pelvis, though not very much. The sub-cutaneous abdominal veins are enlarged and stand out plainly. The uterus lies behind the tumor and in the left side of the pelvis. It is senile and healthy. Her general health seems good, though she is thin in flesh and has indigestion; bowels regular; urine normal; tongue clean, a little reddened; heart and lung sounds are healthy. Notwithstanding her age and some suspicious symptoms, I deemed it proper to give her the chances of an operation, influenced by the consideration

that malignant deposits in an ovarian tumor, when cleanly removed, frequently do not return in other parts.

Operation 5th of June 1884.—Present, Drs. H. H. Battey and West, Glover (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opening the abdomen eight inches, I found extensive parietal, omental and pelvic adhesions, which were separated with difficulty. There were numerous thin-walled, pellucid cysts of the peritoneum of various sizes from a shot up to a walnut. A large cyst of the tumor, being tapped, yielded a gallon of thick, viscid, greenish liquid. The remainder of the tumor was composed of numerous cysts, with gelatinous contents, and a mass of cancerous material as large as the fist. Several of these cysts burst in separating adhesions and their contents escaped into the abdomen. A dozen ligatures were required to the adhesions. The pedicle from the right side was of good length and moderate size. The left ovary and uterus healthy, a rubber drainage tube was lodged in the lower angle of the wound. Weight of tumor, twenty pounds. The pulse was good throughout. She was put to bed in one hour in excellent condition and required no opiate. There was slight vomiting and moderate nausea. On the second day, afternoon, the pulse ran to one hundred and forty and the temperature to 102 degrees. The urine was extremely scanty, and she slept almost the entire day with but a quarter grain of morphia. On the third day, the pulse went to one hundred and fifty, temperature 102.8 degrees; secretion of urine entirely arrested. But a few drops could be secured by the catheter; she died at 4 p. m.

Autopsy, two hours after death, by Drs. H. H. Battey and West. Body much emaciated, abdomen a little tympanitic, wound firmly united, except at site of drainage tube. There was no pus, about three pints of nearly odorless

bloody serum in the cavity. Douglas' space was closed in with adhesions, and contained a mass of soft, cancerous tissue, the left ovary and bloody serum. The bladder was empty; left ureter distended. The kidneys were apparently healthy, the capsules adherent, and the left contained in its pelvis, one and a half drachms of pale urine. The ovarian pedicle was healthy and no blood clots were found.

Case 34—BATTEY'S OPERATION.—Single, age 18. Prior to the first appearance of her menses at 14, she complained of pain in the left ovary, which has continued since. At first this ovarian pain was confined to the periods. But for two years past it is of daily occurrence, and in both ovaries, being especially severe at the menstrual epoch. Her general health otherwise is good. She spends most of her time in bed. The uterus is *in situ* and apparently healthy, though tender upon pressure. The ovaries are extremely sensitive, especially the left one. The tone of the stomach and bowels is in general good. The bladder has been irritable for two or three years. The pulse was one hundred and the temperature 99 5 degrees.

Operation 5th of July, 1884.—Present, Drs. H. H. Battey and West, Glover (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Both ovaries were removed by abdominal incision. There were no adhesions. The left ovary, of double the usual size, contained a hæmatic cyst, which ruptured in handling. The right ovary was as large as a black walnut and contained several cysts with clear contents, two of which burst in removal. The uterus was very small, but otherwise healthy. The operation consumed thirty-five minutes. At 9 p. m. the pulse was 124, the temperature 102 degrees. The maximum temperature 103 degrees occurred upon the eighth day, the maximum pulse 126, on the ninth day, in

connection with acute inflammation of the right parotid gland, a metastasis from the ovarian operation. She returned home on the 11th of August.

Case 35—BATTEY'S OPERATION.—Single, age 35. She has suffered for twelve years with pain in the ovaries, aggravated at the menstrual periods. She entered my infirmary the 21st of June, 1884; had never been examined.

I found the uterus a little retroflexed, the vagina short and narrow. By rectal touch the ovaries were found prolapsed, enlarged and very tender. The *os uteri* is healthy, the cervical canal patulous, and there is no leucorrhœa. The seat of her malady is evidently in the ovaries. She suffers much with irritable bladder. The digestive organs are broken down. She has more or less constant nausea and daily vomiting, which has continued for more than a year. Medicine does little or nothing for her relief.

Operation 7th of July, 1884.—Present, Drs. H. H. Battey, West, Glover (M. S.) and Mrs. Battey. Ether, few drops chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures. Laparotomy, both ovaries removed, patient put to bed in twenty-five minutes. The ovaries were both enlarged, contained hæmatic cysts, with dark, grumous contents; no adhesions. The fallopian tubes, being healthy, were not disturbed. The maximum pulse 104 and the maximum temperature 101.5 degrees occurred upon the second day She sat up on the 15th day and returned home on the 2d of August.

Case 36—BATTEY'S OPERATION.—Widow, age 45, one child. Has complained for several years of pelvic pain. There is uterine myoma, which is steadily growing.

Operation 22d of July, 1884.—Present, Drs. Hudgings, of Knoxville, H. H. Battey and West, Glover (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized

silk ligatures and sutures. Opened the abdomen in median line through one and a half inches of fat. Removed both ovaries. Tubes healthy and not disturbed. The right ovary was cystic and contained a recently ruptured follicle corresponding to the last menses. The left ovary was scarcely half the natural size, but appeared to be healthy. The maximum pulse 92 and temperature 100.8 degrees occurred upon the second day. She sat up on the fifteenth day and returned home on the 22d of August.

Case 37—BATTEY'S OPERATION.—Married, age 28, three children, youngest nineteen months. Invalid for nine years, complains of daily ovarian pain, especially aggravated at her menstrual periods. She entered my infirmary the 14th of July, 1884, with extreme sensitiveness of both ovaries, which did not admit of careful examination, except under the influence of an anæsthetic. There is slight catarrh of the uterus, but otherwise the organ seems healthy. The ovaries are greatly enlarged.

Operation 29th of July, 1884.—Present, Drs Lovelace and West, Glover (M. S.) and Mrs. Battey. Ether one and a half pounds, chloroform one ounce, very hard to impress. Carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen in the *linea alba* about two inches, removed both ovaries; the tubes being healthy, were not disturbed, operation twenty minutes. The ovaries were not adherent The right, as large as a small orange, contained several cysts with clear contents, and *corpus luteum* corresponding to the recent menstruation. The left ovary, more than double the normal size, contained four hæmatic cysts. She was put to bed with a small weak pulse, 56 to the minute, and a temperature of 99.2 degrees. The maximum pulse was 76, the maximum temperature 101 degrees,

on the second day. She returned home to Arkansas on the 18th of August.

Case 38—SINGLE OVARIOTOMY.—Married, age 40, six children, last ten years ago. She has had no menses for eight years, and thinks she has passed the change of life. Her general health is fair Eight months ago she felt bearing down sensations in the pelvis. She thought it falling of the womb and used a sponge pessary. She soon discovered a tumor size of the fist in the right iliac forsa and discontinued the sponge; for the past three months the tumor has grown rapidly and alarmed her; it does not give pain. The tumor rises above the umbilicus, and projects strongly forward like a pregnant uterus. It moves freely under the abdominal wall, is nearly central, but with more fullness in the right side. It is a little irregular and multilocular with one principal cyst which fluctuates distinctly. *Per vaginum* the tumor lies to the front and right side of the uterus, which latter is depressed, retro-flexed, and pushed into the left side of the pelvis. The uterine cavity two and three-quarter inches, moderate leucorrhœa, uterus tender to pressure. General health fair, tongue a little furred, bowels irregular.

Operation 16*th of August*, 1884.—Present, Drs. Gray, of Atlanta; Toole, of Alabama; Berlin and Barton, of Chattanooga; (med. students) Glover and Huzza, Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Operation done in twenty minutes. No adhesions, tumor from right side; the left ovary was white, hard, tunic, leathery and much corrugated, no *corpora lutea.* Pedicle was broad and thin, tied in two portions with silk. The tumor weighed twelve pounds, consisted of one principal cyst and several smaller ones. Patient put to bed without shock, rallied well and required no opiate. The maxi-

mum pulse 110 and temperature 102.8 degrees occurred on the afternoon of the fourth day. She returned home well on the 6th of September.

Case 39—SINGLE OVARIOTOMY—Age 43, married, five children, last, November, 1883. She did not go down as usual after the last confinement, but distention went on rapidly until August 10th, when she was tapped by Dr. P. H. Brown, of Troy, Alabama, and forty-five pounds of liquid obtained, leaving a solid mass behind which he estimated at fifteen to twenty pounds. He aspirated two cysts, obtaining an amber-colored liquid from one, the other a dark wine color. She entered my infirmary on the 22d of September, 1884 She was thin in flesh, with moderate ovarian cachexia, abdomen tightly distended, skin shining, umbilicus effaced, lower extremities decidedly œdematous The abdomen fluctuates freely everywhere and is dull on percussion. No solid material is to be felt in the pelvis. She is unable to lie flat on account of dyspnœa, and pain in the left hypochondrium. The great distention of the abdomen prevents a thorough examination of its contents. The appetite is fair, bowels somewhat relaxed.

Operation 23d of September, 1884.—Present, Drs. H. H. Battey, Lovelace and West, ——— Huzza (M. S) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Patient, being unable to lie down, was etherized in semi-erect posture. Abdomen opened from the pubes to the umbilicus. The abdominal wall was œdematous, and the recti muscles widely separated. The tumor was extensively adherent in the umbilical and left hypochondriac regions; also slight adhesions to the bladder. Two large cysts were emptied with the trocar, and a suspicious semi-solid mass was detached from the left hypochondrium where it had given rise to much pain. A number of liga-

tures were required to control hemorrhage from ruptural adhesions, one being placed upon the peritoneal surface of the bladder. The pedicle, springing from the right side, broad and thin, was ligatured with carbolized silk in two portions. In the left ovary, a small cyst was simply opened and the abdomen closed in thirty-five minutes. The pulse flagged toward the last, but soon reacted without stimulus. The maximum pulse 110 and maximum temperature 101.8 degrees were observed at 6 p. m., after the operation. She suffered but little from nausea, required but little opium, and voided urine normally without assistance. She returned home well on the 21st of October.

Case 40—SINGLE OVARIOTOMY.—Married, age 47, five children, last eleven years ago. It is ten years since she first observed the tumor. Eight years ago she was examined by Dr. Alexander Dunlap, the distinguished ovariotomist of Ohio, who, she says, pronounced the tumor uterine, declined to operate, and said she would not live three days if it were removed. In August, 1883, she was tapped in Atlanta by Dr. H. V. M. Miller, who drew off near six gallons of clear liquid, which looked greenish in the tub. Says the tumor disappeared entirely on tapping and was not to be found until it began to refill. Admitted to my infirmary 14th October, 1884. General health good, appetite excellent. Complains much lately of pain and tenderness in the rignt hypochondrium, for which she requires morphia Thinks this pain was produced by a fall which jarred her very much. Abdomen large and heavy, fluctuates freely and gives the idea of one large cyst above and two smaller ones beneath it. Umbilicus flat, neither drepressed nor pouting. The uterus does not appear to be enlarged, nor is there any solid material in the pelvis. Menses regular. But for the reported adverse opinion of one so experienced as

Dr. Dunlap, I should regard the case as a very favorable one.

Operation October 16th, 1884.—Present, Drs. F. H. Caldwell, of Florida; H. H. Battey, West, (M. S.) Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen five inches. Found extensive and very firm parietal adhesions. Emptied a large cyst containing more than five gallons of deep yellow, albuminous liquid. Detaching adhesions, the cyst wall gave way at several points. Indeed, in places it was difficult to say what was cyst wall and what was peritoneum. In the upper and posterior portions of the sac several patches of semi-cartilaginous material existed and a number of secondary cysts with grumous contents. The posterior wall of the cyst was adherent at one or two points to the intestines. The pedicle, springing from the left side of the uterus, long and broad, was ligatured in two parts with carbolized silk and dropped. The right ovary indurated and corrugated, the outer third, occupied by a firm, yellow, cheesy mass, was left undisturbed. Wound was closed with rubber drainage tube at lower angle. Weight of tumor and contents, fifty pounds. Was put to bed in one hour, with feeble pulse, but soon reacted. Maximum pulse 110 and temperature 100.8 degrees occurred on the afternoon of the second day. Her recovery was uninterrupted, and she returned to her home in Tennessee the 9th of November.

Case 41—SINGLE OVARIOTOMY.—Married thirty-four years, age 52, eleven children, but one living, sixteen years old. Changed life five years ago. Two years ago the abdomen began to enlarge, and she had much medical treatment for supposed dropsy and enlarged spleen. For the last eight months the tumor has developed rapidly with complaint of indigestion and dyspnœa. The 4th of September, 1884,

tapped, nine pints of dark, straw-colored liquid, containing much albumen, and towards the last, thick and oily. She entered my infirmary the 21st of October, 1884. Urine normal and free from albumen, abdomen loose and not greatly distended. Sac was not quite refilled. Fluctuation free as if one cyst occupied the right side, umbilical and hypogastric regions. In the left hypochondrium is a hard mass resembling an enlarged spleen, which extends four inches below the ribs and is not tender to pressure. In the right iliac region there appears to be a second cyst. The pelvis is free of solid material, uterus freely movable, lies behind the cyst and not enlarged. Fluctuation from above is not distinctly felt in the pelvis. Her general health is good; she has no pain. The outlook for an operation seems excellent.

Operation 23*d of October*, 1884.—Present, Drs. McRee, of Alabama; H. H. Battey, West, (M. S) Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen six inches, subcutaneous fat one and a half inches. Tumor free of adhesions, one large cyst, very thick, viscid contents, several smaller cysts with gelatinous contents, besides much solid material. Pedicle, short and thin, sprang from the left side, ligatured in two sections and dropped. More than a pint of albuminous liquid removed from the abdominal cavity. The right ovary is very much atrophied. Patient put to bed in good condition without shock. Maximum pulse 120 and maximum temperature 102.5 degrees occurred on the afternoon of second day. She made a prompt recovery, and returned home well to Alabama the 21st of November.

Case 42—BATTEY'S OPERATION.—Married, age 24, one child four years old, no miscarriages. Her general health previous to her pregnancy had been excellent. During pregnancy she suffered greatly with pelvic pain which continued after the

labor. Has grown steadily worse till the present time. She had also endometritis, and has been for more than three years in the hands of specialists. She finds relief only in morphia and brandy. Entered my infirmary 23d of October, 1884. She complains of constant pain in the right ovary with occasional pain also in the left. Both ovaries are very sensitive to pressure, the right extremely so.

Operation 27th of October, 1884—Present, Drs. R. E. Green, of Gainesville; H. H. Battey and West, Huzza (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen in the median line; one and a quarter inches of sub-cutaneous fat. The uterus is normal. The ovaries both adherent by lymph to the surrounding parts, and bands of lymph extending from them to the body of the uterus. The ovaries were brought into view with much difficulty, and removed entire, together with the fallopian tubes, ligatures being placed low down upon the broad ligament on either side. The left ovary was quite small and very vascular, as also was the right which contained a cyst as large as a hickory nut. There was neither thickening nor corrugation of the *tunica albuginea*. Deep down imbedded in the right broad ligament was a small, firm mass which might be a supplemental ovary. Its removal was not attempted. Operation occupied one hour. Patient put to bed in good condition; at 11 p. m. the pulse was 130 and the temperature 104 degrees This was the maximum. This patient proved unruly, and suffered from protracted nausea and vomiting. Her convalescence was tedious, but she returned home on the 6th of December, bright and happy, feeling better than she had done at any time in five years.

Case 43—BATTEY'S OPERATION.—Married, age 26, two children, youngest three. History of dysmenorrhœa from

her girlhood. For six years she has suffered great pain in the hips, lower abdomen and ovaries. The past five months she has been entirely bed-ridden and much prostrated. Menstruates usually once in eight weeks with very scanty flow. Appetite and digestion poor, obstinate constipation, very nervous, almost constant headache. Entered my infirmary 13th of November, 1884.

The uterus is normal in position and seems to be healthy. The ovaries are not enlarged, but very tender to the touch, and the seat of almost constant pain The menses appeared very scantily November 21st, and continued with but slight show until November 24th.

Operation 26th November, 1884.—Present, Drs. Paul Lawrence, of Louisiana; H. H. Battey, West, Huzza (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Being temporarily disabled by a poisoned wound myself, the knife was used by Dr. H. H. Battey. Abdomen opened, the ovaries being free of adhesions, brought into view and removed with facility. Patient was put to bed in good condition, rested without pain. The ovaries presented the thickened, blanched and corrugated *tunica albuginea* characteristic of cirrhosis. The maximum pulse 110 and temperature 101.6 degrees occurred on the twelfth day. She returned home on the 17th of December, well-healed and in better health than she has been in years.

Case 44.—BATTEY'S OPERATION.—Married, age 40, never pregnant. Had her menses at twelve with pain. She has had almost constant pain in the ovaries, especially the left, for ten years. The menses are irregular and excessive. She is decidedly neurotic and deprived of all enjoyment of life, a great and constant sufferer. Admitted to my infirmary the 12th of November, 1884. The uterus is normal, the

ovaries both very tender. Her nervous system is much broken down and mind markedly impaired. Menses appeared November 22d.

Operation November 29th, 1884.—Present, Drs. H. H. Battey and West, Huzza (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Being still disabled myself, Dr. H. H. Battey used the knife. Opened the abdomen in *linea alba* through one and three-fourth inches of sub-cutaneous fat. The ovaries non-adherent, but with pedicle very short, were brought into view with difficulty. Ligature upon the left side slipped from the pedicle and was re-applied, it being necessary to include the fallopian tube, which, however, was not removed. The left ovary was cystic and contained a recent *corpus luteum* corresponding to the late menses. The right ovary was shrunken, thickened and corrugated. Patient was put to bed with feeble and slow pulse, not more than thirty to the minute. At 7 p. m. the pulse was 48, the temperature 99.2 degrees. Nausea and retching. On the second day the pulse rose to 56, temperature 99.4 degrees. Third day, pulse 60, temperature 99.6 degrees. Fourth day, pulse 66, temperature 98.8 degrees. She returned home to Alabama on the 18th December.

Case 45—BATTEY'S OPERATION.—Married, age 36, four children, youngest five; bad health since last confinement. She complains chiefly of pain in the right iliac fossa. At her periods she describes a hard lump in that region which disappears with the flow. For three years past the menses have been very irregular, at one time an interval of nine months, recently of four months. Great exacerbation of pain when the period should occur, and vicarious menstruation, sometimes rectal, sometimes nasal. For a year past the mind becomes unbalanced at her periods, and she is

insane from four to ten days. In the interval the mind is impaired and dull. These attacks are not hysterical, but distinctly maniacal in their character. Entered my infirmary the 19th of February, 1885, very much emaciated. Has been steadily losing flesh for three years. Appetite precarious, tongue clean, bowels constipated, urine normal. Uterus *in situ*, moderate catarrh, sound passes two and a half inches with moderate pain referred to the right ovary. Both ovaries are abnormally sensitive to the touch, especially the right, which is enlarged. There is mental hebitude, but no maniacal manifestations She has but recently recovered from an attack. The 21st of February she had one of her insane paroxysms. Complained of intense soreness, could not bear the slightest touch, wet her bed.

Operation 23rd February, 1885.—Present, Drs. H. H. Battey and West, (M. S) Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen one and a half inches in the median line. Removed both ovaries with great facility. Whole operation completed in fifteen minutes. The ovaries presented a blanched and thickened tunic; no *corpus luteum*. The tubes, being healthy, were not interfered with. Patient put to bed in good condition, without shock, without nausea, but little pain, required no opium. Secretion of urine was very scanty. At 6 p. m., after the operation, the maximum pulse 94 and maximum temperature 99.8 degrees were noted. Returned home on the 23d of March.

Case 46—DOUBLE OVARIOTOMY.—Married, age 43, two children, youngest ten. Tumor observed half size of fœtal head after last confinement. It is in the right side, movable, firm. Her physician, Dr Patterson, of Louisiana, thought fibrous. The tumor reduced in size, and her general health improved until the fall of 1882, when she had pain in the

right side and began enlarging. In March, 1883, tapped six gallons. In October, 1883, tapped four gallons; then about every three months, nine tappings in all. The last, thirtieth of January, 1885, forty pounds. The hard tumor remained in the right side the size of child's head. Entered my infirmary 24th of February, 1885. She is in good flesh, florid complexion, looks healthy and cheerful, cold and cough for ten days, constipation and occasional indigestion. The abdomen is much distended and fluctuates freely everywhere, dull on percussion; pressing inward in the right iliac fossa, a firm mass is discovered, quite movable, uterus slightly enlarged, sound enters three inches with pain, feet and ankles swollen, urine scanty and high colored, free of albumen, and no casts. She has backache. For a week or two after tapping urine is abundant and clear

Operation 2d of March, 1885.—Present, Dr. John A. Barksdale, of Laurens, S. C., H. H. Battey and West, (M. S.) Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Incision from the pubes to the umbilicus, abdominal wall anasarcous and loaded with fat. Tumor was universally adherent in front to the abdominal wall and omentum, and above to the spleen, stomach and the liver. At two points the adhesions were very firm, and required to be tied and cut. Six gallons of liquid were discharged from the sac and the tumor removed, ligating a rather thin pedicle upon the left side. A dermoid cyst of the right ovary, as large as an orange, was also removed. The oozing from ruptured adhesions was easily controlled by the pressure of sponges, only two ligatures being required at bleeding points. The principal tumor consisted of one very large sac, and numerous small cysts with gelatinous contents, also one cyst of four ounces capacity filled with soft, white, curdy material. The der-

moid cyst of the right ovary contained cheesey stuff with a lot of hair four inches long; no bones nor teeth. The right fallopian tube was spread out over the dermoid and was removed with it. She was put to bed in good condition, suffered but little from either nausea or pain. Cough was troublesome and required occasional doses of opium Pulse and temperature ran low, except on the afternoon of the second day, when the pulse reached 132 and the temperature 102.6 degrees. She returned home to Louisiana on the 26th of March quite recovered.

Case 47—SINGLE OVARIOTOMY, DEATH—Married, age 34, four children, youngest six, menses irregular, appetite and digestion fair, bowels constipated.

Fourteen years ago she passed matter freely from the rectum, accompanied by balls of hair. For four years there were occasional passages of pus and hair. For three years past she has at times passed a few hairs with her evacuations. Two years ago she felt a quivering in the abdomen with pain. The menses were scant and irregular, the abdomen enlarging She suspected pregnancy August 15, 1883; she had much pain and thought herself in labor. Her physician decided that she was not. October, 1883, she thought she felt distinct fœtal movements. Dr. S. could feel these movements "so faintly that it was like a dream," but doubted the pregnancy; thought it might be extra-uterine. November, 1883, he decided she had ovarian cyst, and gave her absorbent medicines which reduced the flesh but not the tumor. She came to me November 20, 1884. The abdomen was enlarged, marked fluctuation in the left side and center, reaching up to the hypochondrium, also in the right iliac fossa and extending down into the pelvis. To the right of the umbilicus and above is a rather firm mass. She does not complain of pain. The uterus is normal in size and

movable. As there was no urgency for immediate interference, and my hand was disabled by a poisoned wound, she was advised to return home and await my recovery.

She was admitted to the infirmary again the 5th of February, 1885. She is slightly asthmatic, has for several years an occasional hacking cough. There is bronchial rale and dull percussion at apex of left lung. Probably some tubercular deposit. Examination of urine shows kidneys healthy. The menses appeared the following day. Before she could be gotten ready for operation she took cold, and had an irritating bronchial cough with little constitutional disturbance.

Operation 9th of March, 1885—Present, Drs. H. H. Battey and West (M. S.) Huzza and Mrs. Battey. Anæsthetic, chiefly chloroform on account of her cough, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen, let out a gallon of yellow serum mixed with jelly and much curdy material, which evidently came from the cyst. Tapped the cyst and removed it, with a mass of secondary cysts of gelatinous contents. There were adhesions to the omentum but none elsewhere. The pedicle on the left side was very short and thick. It was tied in two parts with more than usual care, deep down in the pelvis. On separating the cyst a full half inch from the ligatures, a profuse hemorrhage occurred from large vessels, one of the loops having slipped from the pedicle. Great difficulty was encountered in arresting the hemorrhage, which was finally done with compression forceps with much loss of blood. The patient was so much prostrated, the wound was closed with the compression forceps resting in the lower angle. In the later steps of the operation, it was necessary to lower her head and ply her freely with hypodermics of ether. At 6 p. m. the pulse was quick, but of better volume, the patient

hopeful; 9 p. m. she was resting comfortably. The following morning the pulse was 150 and the temperature 100.2 degrees. There was nausea and vomiting. She had nutritive enemata with brandy and opium, but gradually sank and died on the afternoon of the third day. Autopsy by Drs. H. H. Battey and West. Abdominal incision firmly united, leaving a small opening through which the forceps had protruded Parts in direct contact with the instruments showed dark discoloration with local peritonitis. The coils of intestine were agglutinated. There were no clots. Eight ounces of dark serous liquid was found in the pelvis. The stump consisted of a large, short and fleshy pedicle, made up of adhesions which were attached principally to the omentum, bladder and rectum. The latter had an opening about two inches below the sigmoid flexure which communicated with the tumor. This was partially plugged with hair and was large enough to admit the little finger. Several teeth and particles of bone were found in the mass. The ligature had slipped on the uterine side of the stump where the blood-vessels were very large and had been secured by forceps.

Case 48—SINGLE OVARIOTOMY.—Widow, age 44, one child, 18 years, no miscarriage. In June, 1884, she noticed slight enlargement of the lower abdomen; in October she had pain to the right and below the umbilicus. The lower abdomen became very sore. Had fever, took her bed for some days. She entered my infirmary on the 5th of February, 1885. The abdomen is greatly enlarged clear up to the sternum, very tight, fluctuation marked and dull percussion everywhere. No intestinal resonance either lying or sitting. Left leg and thigh œdematous; slight swelling in the right leg also. The uterus is pressed back into the hollow of the sacrum, cervix normal, sound enters five inches. Menses appeared

on the 7th of February. On the 12th she had a slight rigor, followed by fever, which continued daily, in spite of quinine, up to the latter part of the month, the pulse and temperature ranging about 100 respectively.

Operation 16th of March, 1885.—Present, Drs. H. H. Battey, West and Tigner (M. S.) Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen four inches. Extensive adhesions to the abdominal wall, and to the lower margin of the spleen, which were separated with facility. Emptied thin-walled cyst of a large amount of pale, pea-green liquid; three small secondary cysts. The abdomen was not contaminated at all by cystic liquid. Pedicle on the right side broad and thick, tied in four portions and dropped. Weight of tumor and contents, fifty-one pounds. The left ovary cystic, with hydro-salpinx, is included in a firmly adherent mass, size of a large orange, dips deep downwards between the layers of the broad ligament without semblance of pedicle. It was deemed best not to disturb this until at a future time it might increase in size so that the sac could be stitched in the abdominal wall and properly drained; as the ruptured adhesions continued to ooze, a rubber drainage tube was lodged in the lower angle of the wound. The maximum pulse 110 and the maximum temperature 101.2 degrees were noted on the afternoon of the second day. She returned home to Alabama on the 9th of April.

Case 49—SINGLE OVARIOTOMY.—Married, age 42, never pregnant. For sixteen years she had uterine troubles with dysmenorrhœa and endometritis; she had local treatment four years ago with relief. About three years ago, the abdomen would swell and then subside. Since September, 1884, the growth has been steady, and of late rapid. She has suffered but little pain until the last three weeks, which she has

spent for the most part in bed. Three years ago she had "terrible dragging pains in the back and left side, followed by the discharge of nearly a quart of very offensive pus mixed with cores." The discharge of matter from the bowel continued nearly two years, and when this stopped the abdomen began to enlarge, at intervals the bowels became obstructed and she was very hard to purge. Four years ago she was treated for piles, at Buffalo, New York, with relief. She entered my infirmary 18th of March, 1885. The abdomen uniformly enlarged; projecting forward like pregnancy. The lower border of the ribs turned outwards. Fluctuation distinct everywhere, percussion dull. The uterus lies in front of the tumor and is but moderately movable. The os is in the median line. The fundus leans to the left iliac fossa as though pulled upwards by the right horn. Pulse 96, temperature 79 degrees, tongue furred, urine normal. Bowels purged with difficulty, requiring large doses of active purgatives to produce any effect.

Operation 21*st of March*, 1885.—Present, Drs. H. H. Battey, West, Huzza (M. S.) and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Abdomen opened in median line five inches. Two cysts were evacuated, several small, secondary cysts were withdrawn entire. The base of the tumor was so firmly adherent to the sigmoid flexure, rectum, cæcum and body of the uterus as to render its complete removal out of the question. The sac was, therefore, withdrawn from the abdomen as far as practicable, and its base secured in the abdominal wound. Weight of tumor and contents removed, 26 pounds. The maximum pulse 120 and temperature 103.2 degrees occurred upon the twenty-sixth day. She returned home to Arkansas on the 2d of June, able to travel alone, but with a sinus still discharging considerable pus.

Case 50—DOUBLE OVARIOTOMY.—Married, age 25, never pregnant. She has been subject to uterine hemorrhages for eight years, occasionally requires a tampon, a slight bloody flow nearly all the time. She entered my infirmary the 25th of March, 1885. I find a small mucous polypus hanging from the *os*, pedicle attached to the left wall of the uterus rather high up Sound enters three and a half inches. The uterus is pushed a little to the left side by a tumor of the right ovary the size of a large orange, which is tender to pressure and moves separately from the uterus. Polypus removed with a wire ecraseur.

Operation April 2d, 1885.—Present, Drs. H. H. Battey and West (M. S.) Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen in the median line three inches. Found on the right side cystic ovary containing a quart of dark tea-colored liquid, right fallopian tube dilated, size of the thumb with watery liquid, left ovary also cystic, size of a small lemon. Removed both ovaries and the right tube. In spite of special care in placing the ligature upon the right side, the inner half slipped from its position, a moderate hemorrhage occurred before the vessels could be adequately secured. Rubber drainage tube lodged in the lower angle of the wound. Put to bed in good condition with fair pulse. Pulse reached 120 on the second and third days. The maximum temperature 102.5 degrees occurred on the morning of the second day. She convalesced slowly. Returned home to Alabama on the 14th of July. The ligatures having previously escaped at the abdominal wound, a small amount of pus still discharging.

Case 51—DOUBLE OVARIOTOMY.—Married, age 46, twelve children, youngest six. She had ovarian cyst of the right side twelve years ago. She was tapped by Dr. McCorkle 26th

of February, 1873, who got twenty pounds, by weight, of very dark liquid. In September, 1873, he tapped her again and got about the same quantity, not weighed, of mattery-looking liquid. She thinks it was wholly pus. January, 1874, it broke through the abdominal wall at the point of tapping and discharged pus for three years, when the tumor entirely disappeared. In 1882 she observed the tumor again in the right side with a hard lump at the point where she was tapped. She entered my infirmary the 2d of May, 1885. Her general health was fair, suffered but little pain, menses appear irregularly about once in three months and are scanty. Abdomen enlarged to size of pregnancy at term, but flat. It fluctuates below and in the flanks. There is ascitic liquid, which gravitates downwards as she changes position. In this liquid floats freely a firm tumor, which is anchored to the abdominal wall at the point of previous tapping two inches below the umbilicus, where the skin is puckered and drawn inwards, resembling the latter. The true umbilicus bulges in a fluctuating tumor the size of a turkey's egg. The uterine cervix is normal, freely movable, situated well back in the hollow of the sacrum, and somewhat elevated.

Operation May 6th, 1885.—Present, Drs. H. H. Battey and West, (M. S.) Glover and Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen six inches, liberating the adhesions of the tumor to the abdominal wall, giving vent to a viscid yellow liquid, in which floated numerous small, yellow, curdy masses. Removed a solid, decidedly cancerous mass attached by a good pedicle to the side of the uterus, being the degenerated right ovary. I removed also a cyst of the left ovary with good pedicle. This cyst presented a small opening which was discharging thick, muddy, albu-

minous liquid into the abdominal cavity, of which it still contained about two pounds. There was also cancerous deposit in the sac. The tumor of the right ovary contained a funnel-shaped mass of scaly bone. The peritoneal surface of the fundus uteri had a suspicious look, but no cancerous deposits were elsewhere found within the peritoneum. The abdominal and pelvic cavities were well cleansed with tepid water and free sponging The wound closed throughout. She was put to bed in good condition and did exceedingly well. The maximum pulse 90 and the maximum temperature 100.2 degrees were noted on the afternoon of the third day. She returned home to Tennessee on the 6th of June soundly healed.

Case 52—SINGLE OVARIOTOMY.—Single, age 28, general health always good. Tumor first observed, in the fall of 1881, in the left iliac fossa. It was then firm and size of the fist. In the spring of 1883, she was tapped by Drs. Singleton and McGraw About one gallon of liquid (not near all) was obtained. She has been tapped twelve times since, usually from six to eight gallons at a tapping; on the 13th of April, 1885, eight gallons were removed, and on the 7th of May six gallons of milky-looking liquid. She entered my infirmary on the 9th of May. She is a tall, large-framed woman, stout and robust. The abdominal wall is loose and flabby. The sac contains, apparently, one and a half gallons of liquid. In the left side of the sac is a hard mass, extending from the crest of the ilium nearly to the ribs. There is a similar lobule, though smaller in size, in the right side of the sac; sack itself is large and covers the whole abdomen, appears to be extensively adherent to the abdominal wall; the uterus is virginal, situated behind the sac, and freely movable. The tongue is clean, appetite and digestion good, dejections regular and healthy. She belongs to an epi-

leptic family, having two brothers who are epileptics, and she herself subject to *petit mal*—always at night while sleeping.

The *linea alba* presents numerous marks of the trocar from pubis to umbilicus.

Operation 19th of May, 1885 —Present, Drs H. H. Battey and West (M. S.) Glover and Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen eight inches, gave vent to half gallon of ascitic liquid. The whole anterior surface of the sac was adherent to the abdominal wall, at several points so firmly that the cyst wall gave way in the separation. These adhesions extended to the descending colon in the left side and to the spleen, stomach and liver above. A portion of the contents unavoidably escaped into the peritoneum. Free oozing of blood from separated adhesions was controlled by large sponges without the use of ligatures or other hæmostatics. The pedicle in the left side of good length, broad but thin, tied in two parts and dropped. From the right tube sprang a cyst the size of a walnut, which was removed, together with the entire tube. The right ovary, being healthy, was not disturbed. The abdominal cavity was freely douched with warm water and well sponged. Being ready to close the wound, it was discovered by count that one of the sponges was missing. A careful search of the abdominal cavity, with the hand, failed to discover the lost sponge. Sponges were carefully re-counted, and a diligent search made of bowls and tub without result. Eventually the missing sponge was discovered in the abdomen, snugly enveloped in the omentum and removed. A rubber drainage-tube was lodged in the lower angle of the wound and the abdomen closed.

The patient was put to bed with moderate shock and rested quietly without opium. The weight of the tumor and contents was forty pounds. Within the sac was found a solid mass of cancerous deposit as large as the double fist. For twenty-four hours after the operation she slept profoundly, was roused with difficulty, seemed stupid. In the afternoon of the first day, the pulse was 120, temperature 102.5 degrees. On the third day, the maximum temperature 103.5 degrees was reached. On the twentieth day, she had an epileptic convulsion at night, and was put on bromide of potassium. On the twenty-second day, she had two convulsions, and one on the twenty-fourth day. On the 20th of June, she returned home to Alabama, travelling alone and quite restored.

Case 53—BATTEY'S OPERATION.—Married, age 31, one child, seven, no abortions. She has had uterine troubles dating from her confinement. Had local treatment for endometritis and displacement. She has suffered for years with the ovaries, especially the left. In September, 1882, she had oöphoro-mania, which continued about a year. In 1884, she was operated for lacerated cervix by Prof. T. G. Thomas, of New York, who advised removal of the ovaries if she did not improve. In May, 1885, the mind again gave way and she entered my infirmary on the 28th of that month, with much mental disturbance and pain in the ovaries, especially the left, which was very sensitive to pressure. Menses irregular. Tongue furred, bowels constipated, takes but little food.

Operation 2d of June, 1885.—Present, Drs. H. H. Battey and West (M. S.) Glover and Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. The ovaries were removed with much ease and facility through a very small incision in the linea alba. Tubes being healthy were not disturbed. The left ovary, of which

she chiefly complained, was shrunken, *tunica albuginea* corrugated, blanched and thickened. It contained a *corpus luteum* of about two weeks, corresponding to the last menstrual epoch, and also to the recent mental derangement. The right ovary, much enlarged, contained a cyst the size of a walnut. Patient put to bed in good condition without shock. Maximum pulse 150 and maximum temperature 102 degrees occurred in the evening after the operation. The mental state improved at once. She returned to her home in Alabama on the 3d of July in excellent condition.

Case 54—BATTEY'S OPERATION—Single, age 25, membranous dysmenorrhœa from her first menses. Passes membrane and clots at every period with much pain. There is constant leucorrhœa. For two years she has had constant ovarian pain, chiefly in the left, often in the right, and both ovaries exceedingly tender. She has had local treatment to the uterus to little purpose. She grows worse rather than better; is now wholly disabled from earning her support and dependent upon her friends. Her pelvic organs are extremely tender, especially the ovaries. The uterus is small and retroflexed. Both ovaries prolapsed into Douglas' *cul de sac*, the left enlarged. Menses recur irregularly with two to five weeks interval, and last seven or eight days, very free. She has had repeated attacks of acute proctitis, with occasional passage of pseudo-membrane.

Operation 10*th of June*, 1885.—Present, Drs. H. H. Battey and Lovelace and Mrs. Battey. Ether and chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures Abdomen opened barely one and a half inches Removed both ovaries and the left tube. The right ovary, which appeared healthy, contained *corpus luteum* of last menses. The left was enlarged and contained a cyst the size of a partridge egg. The left tube was enlarged and saccu-

lated, hydrosalpinx. Maximum pulse 90 the evening after the operation. The maximum temperature 100.2 degrees occurred on the sixth day. She returned home on the 27th of June soundly healed.

Case 55—BATTEY'S OPERATION.—Single, age 32. The menses first occurred at seventeen, were easy and regular. Five years ago had pains in the back, left thigh and leg, which were regarded as rheumatism. These pains have continued ever since, especially in the left leg, from the knee down. In December, 1884, she had severe pain in the sacrum and coccyx when she menstruated for the last time. She entered my infirmary the 8th of June, 1885. She was much emaciated and a martyr to neuralgia, bedridden since her last menstruation in December. She required two grains daily of hypodermic morphia to render existence at all tolerable. The uterus is normal and not displaced. Both ovaries extremely tender, chloroform being required to permit the touch.

Operation 11*th of June*, 1885.—Present, Drs. H. H. Battey and Nixon (M. S.), Glover and Huzza and Mrs. Battey. Ether and chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures. Abdomen opened one and a half inches, both ovaries removed with facility, tubes healthy and not disturbed. Left ovary was enlarged and contained several cysts, right appeared healthy. Maximum pulse 80 and maximum temperature 100.7 degrees occurred in the afternoon of the second day. It required considerable effort to break up the morphine habit, but she returned home on the 13th of August well rid of it; is now in excellent health.

Case 56—BATTEY'S OPERATION.—Married, age 33, one child. Entered my infirmary 7th of November, 1884, with history of dysmenorrhœa and ovarian pain since the birth

of her child fourteen years ago. She had retroflexion of the uterus, endometritis, much tenderness of the ovaries. She was treated for six weeks with iodized phenol and returned home for continuance of treatment by her attending physician. She re-entered the infirmary the 1st of June, 1885, not at all improved during the interval. Her general health is fair, body well nourished. She complains of dysmenorrhœa, pelvic pain, and tenderness and inability to take exercise. The left ovary was much enlarged, prolapsed and fixed by adhesions, the seat of constant pain and very sensitive to pressure. The right ovary could not be distinctly mapped out, but was likewise very tender. She was again subjected to local treatment, but did not improve, and it was decided to extirpate the ovaries.

Operation 9th of July, 1885.—Present, Drs. H. H. Battey and West, (M. S.) Glover and Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen through a full inch of subcutaneous fat, found both ovaries deeply imbedded in old and firm deposits of lymph, rendering their removal exceedingly difficult. The left ovary contained a small hæmatic cyst, a second cyst the size of a walnut, filled with clear liquid, which burst under manipulation. The left tube, being thickened and much enlarged, was removed entire with the ovary. The right ovary was very much shrunken, and the tunic thickened and corrugated. The right tube, though not enlarged, was firmly adherent to the ovary and was completely removed with it It was necessary to adjust the ligature upon the right side, deep down in the pelvis, and a small fragment of ovarian stroma was unavoidably left in the pedicle, but the tube was removed entire. Put to bed in good condition without shock. The maximum pulse 96 and the maximum temperature 101.2 degrees

occurred on the afternoon of the second day. In consequence of the small portion of ovarian stroma left in the right pedicle, it was feared that the menses would still continue. This apprehension was realized in the re-appearance of the flow on the 23d day after the operation, when it continued the usual time, and has regularly recurred since with her same old pain. She returned home to Alabama the 24th of August.

Case 57—BATTEY'S OPERATION.—Single, age 23, menses appeared at fourteen with pain; she has had dysmenorrhœa ever since. She has been bed-ridden for eighteen months with daily and constant ovarian pain. She was subjected to local uterine treatment for over a year without relief. She entered my infirmary the 22d of April, 1885. Uterus retroflexed, tender, cervical catarrh. The ovaries are enlarged, prolapsed and very tender. I subjected her to local treatment with iodized phenol for three months without material benefit; advised removal of the ovaries.

Operation 18*th July*, 1885 —Present, Drs. H. H. Battey and West, (M. S.) Glover and Huzza and Mrs. Battey. Ether and chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures. Short incision in the *linea alba;* ovaries prolapsed, not adherent; removed with ease; tubes healthy; uterus small and strongly retroflexed. Especial care was taken to remove the ovaries cleanly and to leave the tubes intact. The right ovary was enlarged by the cyst, which burst in removal; tunic thickened and corrugated; *corpus luteum* a week old. The left ovary was shrunken, the tunic blanched and thickened. The maximum pulse 84 and the maximum temperature 101.2 degrees observed six hours after the operation. She returned home to Alabama on the 14th of October, 1885.

Case 58—SINGLE OVARIOTOMY.—Single, age 32, always in good health until September, 1884, when she observed the abdomen enlarging. In December she had her last menses. She has been much reduced by diuretics and drastic purgatives given for dropsy to no purpose. Entered my infirmary the 1st of August, 1885. Abdomen much enlarged and very tight; dull percussion and free fluctuation; feet and ankles œdematous. The uterus is small and pushed strongly against and above the pubic arch. Free fluctuation in Douglas' *cul de sac.*

Operation 4th of August, 1885.—Present, Drs. James A. Gray, of Atlanta; H. H. Battey, West (M. S.) Glover, Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Abdominal incision five inches; small amount of ascitic liquid escaped. There were extensive adhesions in the left iliac and right hypochondriac regions. The abdomen was so tense that the principal cyst was tapped and four gallons of black viscid material removed before the adhesions were broken down. Portions of the sac presented a dark discoloration suggestive of impending slough. There was a mass of secondary cysts filled with colloid material of varying consistency. The liquid from the main cyst was intensely black and thick like molasses. Pedicle from the left side of the uterus was of good length but fleshy, and included the fallopian tube, very much enlarged and elongated, but with its finbriated extremity free. Pedicle ligatured with carbolized silk and dropped. Left ovary healthy, not interfered with; cavity was well douched with warm water and sponged. Wound closed throughout. Weight of tumor and contents, forty-seven pounds. Was put to bed in one hour in good condition. Within nine hours after the operation, four quarts of limpid urine were withdrawn from the bladder and the œdema of the extremities was

markedly diminishing. The polyuria continued the following day. By the third day morning the œdema was entirely gone. Maximum pulse 96 and maximum temperature 101 degrees occurred in the evening of the second day. She convalesced rapidly without opium. Returned home on the 24th of August sound and well.

Case 59 BATTEY'S OPERATION.—Married, age 37, two children, youngest seven. Bad health since her last labor. She entered my infirmary the 12th of August, 1885, a complete wreck; very feeble, much emaciated, digestion very bad, tongue a little furred, bowels kept open by daily laxatives. Prolapsed uterus supported by a ring pessary The left ovary is enlarged and prolapsed, exceedingly tender to the slightest touch. She suffers pain in both ovaries, that in the left side extending down the limb to the foot The os is excoriated and red, tender to the touch, moderate leucorrhœa. She says the pessary relieves her somewhat. It is strange she is able to wear it at all.

Operation August 15, 1885.—Present, Drs. H. H. Battey, West, (M. S.) Glover, Huzza and Mrs. Battey. Ether, trifle of chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures Opened the abdomen one and a half inches. Body of the uterus acutely retroflexed. The ovaries are prolapsed and adherent by lymph to the surrounding structures. Pedicles were so short it was deemed best to place the ligatures quite low and remove the tubes, notwithstanding they were quite free of disease. The ovaries were greatly enlarged and cystic. Maximum pulse 72 and maximum temperature 101.7 degrees were observed on the afternoon of the second day. She returned home to South Carolina on the 12th of September soundly healed.

Case 60—BATTEY'S OPERATION.—Married, age 24, two children; first still-born at term, choked by cord; second

two years ago, stillborn at seven months; bad health ever since. She has been subjected to local treatment of the uterus for two years without avail. She entered my infirmary the 23d of July, 1885 She is much confined to bed; cannot walk, finds it painful to ride. The pelvic organs are very tender to pressure. The os is slightly excoriated, endometrium tender, slight leucorrhœa. The right ovary is prolapsed, enlarged and cystic, very sensitive to the touch and the seat of much pain, radiating throughout the pelvis and down the right limb, requiring frequent doses of morphia for its relief. The left ovary is also tender to pressure and the seat of pain.

Operation August 19, 1885 —Present, Drs. Sanders, of Harris county, Ga.; H. H. Battey and West, (M S.) Glover, Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Abdomen opened two inches. The left ovary and tube were bound down by firm adhesions. There was really no pedicle. The ligature was passed well down in the broad ligament, but a small portion of ovarian stroma was unavoidably left behind. The right ovary and tube were completely removed. The right ovary contained two cysts, one hæmatic, the other, with yellow liquid, was large as a walnut. There were also two parovarian cysts of equal size. The left ovary contained a hæmatic cyst also. Both tubes were distended with dark, sanguinolent pus, the right one as large as my forefinger. There was considerable shock, but she rallied well and was put to bed. Maximum pulse 130 was observed in the evening after operation. Maximum temperature 103 degrees occurred on the 12th day, due to the malarial poison she had brought with her. On the 15th of October I removed a small keloid growth situated over the spine of the right scapula, which had troubled her for

several years. On the 19th of October the menses appeared and continued five days, and again returned on the 4th of November. She returned home on the 27th of November.

Case 61—DOUBLE OVARIOTOMY.—Single, age 22, always in robust health until May, 1884, when she had a fall from a horse and hurt her left side. First noticed her abdomen enlarging in August, 1884. Little or no pain, six months, menses too free and too frequent. She is in fair flesh and digestive apparatus in good state. She entered my infirmary the 2d of October, 1885. The abdomen is evenly rounded over, not projecting like pregnancy, nor flattened like ascites. Percussion dull everywhere, from pubes to ensiform cartilage and flank to flank. Fluctuation distinct above the umbilicus, below the tumor is elastic. Uterus healthy, os *in situ*. Fundus pushed to left side and a little backward. Sound enters two and a half inches, only moderately movable. She is a snuff-dipper.

Operation October 3*d*, 1885.—Present, Drs. Wells, of Chattanooga; Boyd, of Red Clay, Georgia; H. H. Battey, West and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen five inches, no adhesions. Emptied a half gallon of thick, yellow, syrupy liquid. The remainder too thick and gelatinous for the trocar, I broke down septa and turned out the contents of numerous gelatinous cysts, and drew out a thick and fleshy sac. Pedicle attached to left side, of good length, broad and thin; ligatured in two portions and dropped. The right ovary large as a pullet's egg. Full of small gelatinous cysts, and kidney-shaped, was ligatured and removed. Cavity was contaminated with much cyst jelly and some blood. It was well douched with warm water and sponged; the wound was completely closed. Maximum pulse 84 and maximum temperature 100.5 degrees were observed five

hours after the operation. She returned home to Tennessee the 31st of October soundly healed.

Case 62—BATTEY'S OPERATION.—Married, age 29, four children, youngest two. Her health gave way at the birth of the second child; bed-ridden since the last confinement. Her digestive apparatus is much broken down, and her nervous system completely shattered. Entered my infirmary the 10th of September, 1884. Retroflexion of the uterus, prolapsed ovaries, endometritis, excoriated os. She was subjected to local treatment at my hands for thirteen months with but partial success. Much of what was gained in the intervals was lost at the menstrual periods. The prolapsed and tender state of the ovaries would not admit of any mechanical support to the displaced uterus. It was therefore deemed best, as a last hopeful resource, to extirpate the ovaries.

Operation October 21*st*, 1885.—Present, Drs. H. H. Battey, West and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen one and a half inches; the ovaries were free with good pedicles, both removed. Tubes being healthy were not disturbed. Operation complete in twenty minutes. Both ovaries were enlarged and cystic. Uterus strongly retroflexed. Maximum pulse 90 and maximum temperature 100.7 degrees observed on the afternoon of the third day. She convalesced nicely from the operation and returned home to Alabama December 18th, 1885, much improved, but still quite feeble. During the winter she had pelvic inflammation and abscess about the left stump.

Case 63—BATTEY'S OPERATION.—Married, age 31, three children, two abortions. She has been troubled with ovarian pain since her first labor. For two years her suffering has been great, especially in the right ovary, with frequent attacks of giddiness and occasional *petit mal*. Digestive

organs broken down. She entered my infirmary November 27th, 1885 Uterus retroflexed, os patulous, leucorrhœa. Both ovaries are enlarged and tender, the right one prolapsed. Pain in the right ovary is constant and at times very severe. She is entirely disabled by it.

Operation November 29th, 1885.—Present, Drs. H. H. Battey, West and Mrs. Battey. Ether and chloroform, carbolic solutions, carbolized silk ligatures and sutures. Atomizer being out of order, spray was omitted. Abdominal incision barely one and a half inches. Ovaries free. Both removed. The tubes being healthy were not disturbed. Uterus retroflexed. Both ovaries were enlarged and filled with small cysts, some clear, others purple. In the right ovary, *corpus luteum* corresponding to the last menses ten days ago. Maximum pulse 80 and maximum temperature 100.5 on the afternoon of the second day. She progressed nicely and returned home to Arkansas the 19th of December, 1885.

Case 64—BATTEY'S OPERATION.—Married, age 24, no child, three abortions in quick succession. Her general health was excellent up to her marriage, when she missed her menses two months, consulted a female doctor, who passed a sound; abortion followed. She has been treated at the Hot Springs, at Waukesha, and spent nine weeks in a private infirmary at Cincinnati, where the uterus was thoroughly curetted. She entered my infirmary February 1st, 1886. For a year she has spent the time in bed and upon a lounge. She has daily pain in the ovaries, greatly intensified at her periods. These are abnormally frequent and profuse with passage of clots, and occasionally greenish, offensive pus like an abscess had opened. The uterus is anteflexed and tilted to the right side. The ovaries are very tender, especially the left, which is greatly enlarged, and the tube also. She complains of pain about the heart and smothering spells. I do

not find any organic disease of the heart or lungs. I advised her to try uterine treatment for two months longer to see what can be done; she is unwilling to wait on this, and I do not think it can result in more than palliation to her sufferings. She pleads to be rid of her malady.

Operation February 6th, 1886.—Present, Drs. T. R. Kendall, H. H. Battey, West and Mrs. Battey. Carbolic spray and solutions, carbolized silk ligatures and sutures. Abdomen opened two inches. Uterus is anteflexed and pushed over towards the right side. The right ovary, adherent by lymph, was detached and removed. The tube being healthy was not disturbed. The left ovary, size of a hen's egg, firmly adherent. It is degenerated into an abscess, which burst in manipulation and discharged into the pelvis dark, grumous pus. A pyo-salpinx, size of the thumb, adherent to the diseased ovary, was removed with it. So thin was the wall of the ovarian abscess a rude preliminary examination might easily have ruptured the sac into the abdominal cavity with fatal consequences. Pelvis was carefully washed out to remove pus and blood, and the wound closed entire. The maximum pulse 130 and maximum temperature 103.2 degrees were observed on the afternoon of the third day. Returned to her home in Arkansas on the 21st of March soundly healed.

Case 65—DOUBLE OVARIOTOMY.—Married, age 43, one child grown and married, no miscarriages. Robust, hearty woman. Nine years ago observed a lump in the left iliac fossa, which has progressed. Until within the past twelve months the progress has been rapid. Menses irregular for a year. Last period, ten days ago, quite free. The lower abdomen is projected forward by a tense fluctuating tumor, irregular in outline, extending across the abdomen and above the umbilicus. The tumor is rather fixed in the pel-

vis, uterus lies in front, not enlarged, not freely movable. She is asthmatic and has slight cough.

Operation March 1, 1886.—Present, Drs. T. R. Kendall, H. H. Battey, West and Mrs. Battey. Ether and chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen six inches. The tumor, covered in front with a net-work of vascular bands coming up from the pelvis, springs from the whole length of the left broad ligament without any distinct pedicle. It was ligated with much difficulty and some loss of blood in consequence of the ligature slipping. It was necessary to allow the small intestines to lie on the abdomen enveloped in warm towels whilst the pedicle was being secured low down in the pelvis. The right ovary was also degenerated into a double dermoid cyst, which was removed. A portion of cyst contents escaped into the abdomen and a small portion of the cyst wall was unavoidably left in the stump. The abdomen was well douched with warm water and a rubber drainage-tube was lodged in the lower angle of the wound. The tumors were both dermoid and contained much steatomatous matter with fragments of bone and numerous teeth, many of them large and well-formed. She was put to bed in good condition with but little nausea and no vomiting. The maximum pulse 120 occurred on the sixth and twelfth days. The maximum temperature 101.5 degrees upon the twelfth day. The drainage-tube and seven sutures were removed on the fourth day. The bowels being well emptied, the six remaining sutures were taken out on the fifth day. In the afternoon she had an attack of violent bilious vomiting, and being a stout, muscular woman, she rent the united wound completely asunder, the omentum protruding. This was pressed back into the abdomen and the sides brought together with four points of deep su-

ture. On the following morning the pulse was 120 and the temperature 99.2 degrees. There was nausea, but the abdomen not distended, she was passing flatus freely. In consequence of this accident the convalescence was unusually protracted. The sutures were removed on the eleventh day. he peritoneum well united, but the outer wall gaping the whole length of the wound, was secured with adhesive straps. She returned home six miles on the 2d of May, pus still discharging.

Case 66—BATTEY'S OPERATION.—Single, age 27, suffered ovarian dysmenorrhœa since her girlhood. She has travelled much for her health, been under treatment of many physicians. She entered my infirmary October 20, 1885. There was endometritis, retroflexion, right ovary prolapsed, both ovaries very tender, and with constant ovarian pain. For two years her nervous system has been completely broken down and her mind so much impaired as to give great uneasiness to her family. She spent some months under the care of a reputable specialist. She had local treatment and baths; a pessary was adjusted, but gave so much pain it was discontinued. She received local treatment at my hands for five months with but partial relief.

Operation 8th of March, 1886. - Present, Drs. Adams, of Lexington, Mo.; T. R. Kendall, H. H. Battey and West and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Abdomen opened one and a half inches, both ovaries removed. The tubes being healthy were not disturbed; operation completed in twenty minutes. The uterus was decidedly retroflexed; right ovary prolapsed and adherent. Both ovaries contained numerous small cysts. The tunic was thickened and blanched. Maximum pulse 120 and the maximum temperature 103.2 degrees was observed on the afternoon of the third day. She conval-

esced well and returned to her home in Florida on the 20th of May soundly healed.

Case 67—BATTEY'S OPERATION.—Single, age 32. Dysmenorrhœa from her girlhood. Bed-ridden for three years. She has been long under medical treatment by specialists. Brought to my infirmary on a litter February 4, 1886. She is much emaciated; digestive apparatus and nervous system thoroughly broken down. Her periods are regular and accompanied by much ovarian pain and nervous disturbance. Uterus small, retroflexed; os healthy; slight leucorrhœa. The ovaries are prolapsed and very tender to pressure. Pulse quick and small.

Operation March 21, 1886.—Present, Drs. H. H. Battey and West, and Mrs. Battey. Ether and a little chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen scarcely an inch and a half. Both ovaries removed with facility and occupied twenty minutes. Tubes healthy and not disturbed. Both ovaries are full of hæmatic cysts; tunic much thickened. Put to bed in good condition without shock. Stomach quiet. The maximum pulse 110 and the maximum temperature 100.5 degrees were observed on the third day. She recovered promptly from the effects of the operation and is still in the infirmary.

Case 68—DOUBLE OVARIOTOMY.—Single, age 31. She entered my infirmary the 16th of March, 1886. The abdomen has been enlarging for near two years. Growth rapid in the last six months. Menses irregular, free of pain. She is thin and scrawny, appetite poor; the ovarian cachexia; abdomen is smoothly enlarged, projects forward like a pregnant uterus; fluctuates freely like a large single cyst. The wall moves freely over the tumor. Uterus virginal; lies in

front of the tumor and depressed by it. Menses just appearing.

Operation 30th of March, 1886.—Present, Drs. Adams, of Missouri; H. H. Battey, West, Huzza and Mrs. Battey. Ether, little chloroform, carbolic spray and solutions, carbolized silk ligatures and sutures. Opened the abdomen four inches upon a unilocular cyst of the right ovary, containing thin liquid of almost inky blackness. There being no adhesions, the sac was readily withdrawn; the broad, thin pedicle of good length secured by ligature. Attached by fleshy pedicle to the uterine fundus was a sarcomatous tumor large as a hen's egg; in appearance malignant. Pedicle ligatures and tumor removed. The left ovary, though not greatly enlarged, was distinctly cystic, and several cysts were ranged along the fallopian tube. The ovary and tube were removed. Weight of tumor and contents, twenty-two pounds. No cystic liquid having entered the peritoneum, the abdomen was closed without sponging. Put to bed in good condition without shock. On the fourth day the pulse was 84 and the temperature 103 degrees. Pulse reached 100 only upon the fifth day. She convalesced promptly, but being a little timid, she remained in the infirmary until the 20th of May, when she returned to Savannah well.

Case 69—BATTEY'S OPERATION.—Married eleven years, age 34, four children, last six years ago, premature. Broken down in health since her third labor. Menses regular, last five to six days, scanty with much ovarian pain. Pain in the right ovary has been constant for four years. Digestive apparatus broken down, nervous system shattered. Entered my infirmary April 13th, 1886. The uterus is in position and seems healthy; not at all tender and no discharge. Both ovaries exquisitely tender to the touch and the pain continues

for hours after each examination. The right ovary is prolapsed, enlarged; the left can't be well defined.

Operation April 17th, 1886.—Present, Drs. T. R. Kendall, H. H. Battey, West, Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Abdomen opened an inch and a half; removed both ovaries and the right tube. No adhesions. The right ovary contained one large hæmatic cyst and two smaller ones. Tunic blanched, thickened and corrugated. The right tube had several cysts attached to it; was otherwise healthy. The left ovary was very much shrunken, the tunic thickened and corrugated. Put to bed in good condition. Had nausea, but no vomiting. Required no opiate. She convalesced promptly. The maximum pulse 90 and maximum temperature 101 degrees occurred on the first day. She returned home to Tennessee on the 16th of May soundly healed.

Case 70—BATTEY'S OPERATION.—Married twelve years, age 33, five children, youngest six, no abortions. Bad health since last labor. She complained of more or less constant ovarian pain, aggravated at the periods. Has been confined to her bed for a month past, and has frequently such attacks. She is a great and constant sufferer and prays for relief. She entered my infirmary April 26th, 1886, and was examined under chloroform. The ovaries are exceedingly tender to the touch despite the chloroform. The os is slightly notched at two or three points and the uterus retroflexed. The right ovary is prolapsed and enlarged, the left could not be well defined.

Operation April 30th, 1886.—Present, Drs. W. W. Fraser, of South Carolina; H. H. Battey, West, Huzza and Mrs. Battey. Ether, carbolic spray and solutions, carbolized silk ligatures and sutures. Small incision in the *linea alba*,

Ovaries not adherent and removed with facility, together with the right tube. The right ovary contained one hæmatic cyst, size of a wren's egg, and three or four smaller ones. The tube had several pellucid cysts along its border and two small cretaceous nodules. Its canal appeared healthy. The left ovary was shrunken and corrugated, the tunic thick and brawny like morocco leather. The left tube being healthy was not disturbed. She bore the operation well; was put to bed in good condition in thirty minutes. Pulse ran down on the third day to 56, maximum temperature 101.2 degrees occurred on the fourth day. She returned home to Alabama on the 10th of June soundly healed.

MALARIAL HÆMOGLOBINURIA.

By H. McHATTON, M. D., Macon, Ga.

My attention was first called to this disease in the summer of 1884 by having a specimen of urine referred to me for analysis. The conclusions drawn from the specimen were that the condition was that of hæmoglobinuria, and not hæmaturia, the destruction of the corpuscles taking place in the circulation at large, that quinine should be our sheet-anchor in treatment, and that cathartics were contra-indicated on account of their depressing effect.

Finding that all writers (as far as I could learn by reading) were of the opinion that it was a hæmaturia, and that there was great diversity in regard to treatment, I determined to study the subject to the best of my ability. To this end I published a circular letter in *The Atlanta Medical and Surgical Journal*, requesting the practitioners of the State to forward specimens of urine to my address, giving their opinions in regard to treatment, mortality, etc.

I received many specimens (more from Dr. Hilsman, of Albany, Georgia, than from any one else), but virtually no expression of opinion.

Living far from any medical centre, my literature has been confined to that of my own library; consequently there may be many valuable contributions to this subject that have escaped my notice.

There has been much discussion in regard to the first appearance of this disease. Feraud cites cases on the African

coast as far back as 1820, and shows that it appeared in the new French posts a year or so after their settlement. I have heard of cases in Georgia in 1825 or 1830; the probabilities are that it is as ancient as any of the malarial group.

No race can claim exemption if put under favorable conditions for its development; the supposed immunity of the negro is not real; that they suffer less is unquestionable; they are not, as a class, a migratory race, and consequently less subject to variations of climate.

I have examined a specimen of urine from a case occurring in a mulatto, besides seeing several recorded, as well as one case of a full-blooded negro.

The etiology of this condition is unquestionably malarial; it only occurs in those that have been for some time exposed to malarial atmosphere, and have given evidences of malarial toxæmia; it responds as well to quinine as the average pernicious malarial attack; it is totally different from yellow fever, the only disease with which it is often confounded.

Pathological anatomy, according to Feraud, is as follows:

The skin is uniformly yellow and not in patches, as is the case in yellow fever. The earlier in the attack that the patient dies, the more intense the jaundice; ecchymoses is not as common as in yellow fever and effusions of blood in the muscles are not met with. There is no escape of blood from the muco-cutaneous openings, nothing characteristic in the cranial or thoracic cavities; the stomach is full of a greenish-colored liquid resembling spinach water. If there are inflammations of this organ, he considers that they are due to other causes, alcoholic principally.

The intestines present no peculiarity; the liver is the seat of decided changes, estimating the healthy liver at 1,796 grms. (61¼ oz.); the weight is usually increased from 200 grms. to

1,000 grms. (from 7 to 35¼ oz.), this increase being due principally to congestion. The liver feels hard to the touch, the gall-bladder is distended with very dark viscid bile, the spleen weighs from two to three times the normal, is soft early in the disease, and hard later. The kidneys are congested and their weight increased; for the lack of instruments, the minute anatomy of these as well as the other organs has not been studied.

Many spots of ecchymoses are found in them, principally in corticle substance. The veins are in a state of extreme repletion; in fact, the state of congestion is often excessive, the pancreas, superrenal, capsules, uretes and bladder present no special lesions. There has been no competent chemical and histological examination of the blood; it gives gross evidences of a large amount of bile.

The patients with this disease have always given previous evidence of malarial toxæmia, and the longer that they stay in a malarial climate, the more apt they are to contract it. One attack predisposes to another.

In the study of one hundred and eighty-five cases, Feraud found that ten occurred in the first year of exposure, forty-two in the second, seventy-nine in the third, thirty-seven in the fourth, nine in the fifth and eight after the fifth.

The majority of patients under his care were soldiers and criminals who were sent to Africa on an average of three years' time; consequently after the third year the residents became numerically less.

Feraud divides malarial hæmoglobinuria into four types, which only differ in intensity, first mild, second severe, third grave, fourth siderant or pernicious. The mild form is usually intermittent; still any of the four may be intermittent, remittent or continued.

The initial chill is usually more violent than the previous ones that the patient has had, and is generally accompanied by nausea, vomiting, headache and hæmoglobinuria. The jaundice comes on rapidly and is more intense than I have ever seen it in any other disease.

There is usually pain over the region of the kidneys and liver which is increased by pressure.

The urine is increased in quantity early in the attack, but complete suppression sometimes takes place toward the end of the disease in fatal cases. Vomiting is one of the most distressing symptoms.

The vomited matters vary in color. At first they are the food, followed by emesis of biliary matter, and often the pure black vomit.

I have succeeded in producing hæmin crystals from the vomited matters, so that there is no question in my mind that they often contain the blood constituents.

The bowels are sometimes loose and sometimes normal in frequency. The passages often resemble in color the urine. Unfortunately I have been thus far unable to make a chemical and microscopical examination, but the appearance often gives gross indications of the blood constituents.

Singultus in grave cases is a most distressing and persistent symptom. I have never seen hemorrhages from any of the muco-cutaneous openings.

The diagnosis of this disease is not difficult. In a person having been exposed to malarial influences for some time, a chill followed by more or less intense fever, green or black vomit, and hæmoglobinuria, are sufficient to establish an absolute diagnosis. The examination of the urine is most important.

I have had the opportunity of examining a great many specimens of urine in the past year, and can give the follow-

ing as the general characteristics. In color it varies from a brownish red to a brownish black. The order is usually that of normal urine, specific gravity from 1,012 to 1,034, dropping below the normal in convalescence, say 1,006 to 1,008.

Re-action in all the fresh specimens has been acid, sometimes very faintly so. It is always albuminous and will often boil solid. The sediment is usually quite abundant and a shade or so lighter in color than the urine. It is composed principally of granular matter, resulting from the decomposition of the blood corpuscles.

This often occurs in the shape of casts when they are very abundant. I look upon it as of serious import, as the two cases that have come under my observation have resulted in suppression. The casts were so abundant in these cases that it seems to me that the suppression might have been mechanical.

Other casts are often present, but in my experience never abundant. They are usually hyaline or hyalo-granular, sometimes with a few blood or pus corpuscles attached. Uric acid and oxylate of lime crystals, with kidney, bladder (and in the female), vaginal epithelium often occur.

In fact all the train of unimportant urinary constituents are liable to be found. I have never found blood corpuscles in any number, and in many perfectly fresh specimens (20 to 25 minutes old) have failed to find a single one, but have always succeeded in producing hæmin crystals in abundance. Blood corpuscles have been observed by competent men, so that there is no question of their occurrence in considerable numbers in some cases. Still I look upon this as purely accidental and probably dependent on the rupture of capillaries in the congested kidneys.

The coloring matters of the blood can also be demonstra-

ted by boiling the specimen with sodic-hydrate and by the guiacuna and turpentine test.

Specimens of the black vomit in these cases give abundant hæmin crystals.

The following is a translation of Feraud's valuable table on the differential diagnosis between this disease and yellow fever. The only remark that I have to make in regard to it is, that it is twelve years old and considerable advance has been made in the study of the two diseases during that time:

MALARIAL HÆMOGLOBINURIA.	YELLOW FEVER.
A protracted stay in warm malarial countries is the predisposing cause, the most powerful and even indispensable.	A protracted stay in warm countries, malarial or not, decreases the probability of attack.
The sickness is always preceded by numerous paroxysms of malarial fever, simple at first, and then more or less complicated, and generally assuming more and more the bilious aspect.	The disease starts generally in the midst of perfect health and may show itself in subjects who have never had any attacks of intermittent fever, and who show signs of perfect health
In every case the patient is notably anemic.	
Generally the disease commences with a paroxysm of fever with violent shivering of longer or shorter duration, in every respect similar to a paroxysm of malarial fever.	The disease starts frequently with a cephalalgia which keeps increasing; the beginning of the fever cannot be determined as well as the commencement of the malarial paroxysm which is instantaneous.
The icterus appears at once with the first paroxysm of the disease, never goes off and gives from the outset and during the whole time a yellowish cast to the patient, varying from a yellow green to a deep yellow ochre; it is in every case general and of the same shade throughout.	The icterus appears toward the third day and takes the place of the red color of the integument which was present at the outset of the disease; sometimes it does not show itself if the attack is light and the recovery rapid; it is sometimes confined to certain regions, or exhibits noticeable degrees of intensity in different places on the same subject.
The course is intermittent or remittent at first; the pulse, urine and vomiting follow exactly these variations; when the fever ceases then follows the	The course is continuous with inflammatory tendencies for two, three or four days; a change then takes place; it is distinct enough to have been called the

period of weakness and recuperation; this is not similar to the remission in yellow fever, and is not separated in a perfect and absolutely distinct manner from the first paroxysm. It seems, indeed, that the fever is unwilling to give up its intensity, often endeavoring to return in its full strength if the patient succumbs to the fever period.

If the patient reaches the adynamic period he dies rather from profused exhaustion than from the effects of decomposition.

The pulse follows the habitual variations of malarial fever during the feverish period of two or three paroxysms, which constitute the first part of the sickness; it does not drop at once and absolutely, being in this and all other respects similar to the pulse of the intermittent paroxysms; even when everything is going on well, there can be noticed daily variations, which are indications of abortive paroxysms.

A total cephalalgia forming a heavy cap on the cranium of the patient goes on increasing during the six or eight hours of the paroxysm, then decreases noticeably and sometimes disappears to return at the next paroxysm.

The face is haggard and yellowish from the start or soon after the invasion of the disease; the conjunctivæ are yellowish in color, never injected and shining, as in the case of incipient conjunctiritis.

The pains in the trunk extend around the body from the small of the back to the hypochondriacal regions; the hepatic and epigastric regions are at times exceedingly painful, and touching them induces shooting pains that may provoke cries from the patient, yet they are often hardly noticed, and at times these pains resemble rheumatic pains in the

convalescence of death; indeed, for from six to twenty-four hours it may be believed that the disease is ended and that the patient has become convalescent.

The second period is perfectly separated from the first by this transition. It is, so to speak, a period of disintegration of the subject, killing the patient by decomposition, suppuration, hemorrhage, etc.

The pulse at the outset is full and regular, as in continued fever, and it remains so until the transition called the convalescence of death; at this time it drops all at once and remains compressible and infrequent.

A super-orbital cephalalgia is at first very intense, but it either rapidly gives way under treatment or continues without intermittence to the end of the inflammatory period during one or two days.

The face is flushed, of a light mahogany color at the start; it is only after several days that it becomes yellowish at the nostrils, the eye lids and the lips; the eyes are shiny, the conjunctivæ injected, and sometimes slightly bleared, as in incipient conjunctiritis.

The pains in the lumbar regions, which have been called coup de barre, are characterized by their intensity; they are very violent and do not extend around the body; the hepatic and epigastric regions are not painful to the touch; generally acute pains are felt in the limbs, especially in the calves.

limbs, being neither very persistent nor very acute; it is rather a condition of uneasiness and weariness than of well-defined pain.

The vomited matters are bilious, of a very pronounced green color, often similar to spinach water. The vomiting occurs constantly from the start of the paroxysm and stops with it to return with the next.

After the first period, or fever period, vomitings continue, but preserve exactly the same characteristics. They stain linen light green, and if gathered in a basin they appear transparent and of an emerald green or olive color.

There is at times a bilious diarrhœa from the start of the disease and during the vomitings; later there is often a lessening of the stools, and frequent recourse must be had to aperients to keep the bowels open.

The paroxysms at the onset may be allayed by quinine, and never call for antiphlogistics.

The disease is manifestly connected with malaria; it follows and is followed by paroxysms of intermittent fever; it is absolutely not transmissible from man to man.

Relapses in this disease are very frequent, and more and more easily contracted as the attacks are multiplied.

The tongue is damp and large, covered first with a whitish coating tolerably thick; this coating is soon colored greenish by the vomit; the tongue is not red at the point nor at its edges; it remains

Vomiting at the start is not frequent, and is in no case bilious. The spells of vomiting do not exhibit that intermittence noticed in the bilious hemorrhagic fever.

After the inflammatory period the vomitings, when they appear, are first watery and colorless, then gray, then brown, containing a matter like soot, staining linen blackish brown, and not light green, absolutely opaque, when received in a basin.

Constipation is common at first, diarrhœa only when the sickness is protracted and is not bilious; on the contrary, it is exceedingly fœtid, indicating a profound decomposition and often containing that black matter absolutely unknown in bilious hemorrhagic fever.

The fever continues from the start; cannot be controlled by quinine and often requires antiphlogistic treatment.

The influence of malaria has not been incontestibly proved; the disease is not necessarily nor even normally preceded or followed by paroxysms of intermittent fever; the transmission from man to man is sadly and terribly frequent.

A second attack of this disease in the same patient is so rare that its occurrence has been denied by many authorities.

The tongue is white at its center, where it is fuzzy; it is red on the tip and on the edges; it is small and rounded; later it is bleeding or tough and trembling as in typhoid affections.

large, coated and damp to the end of the sickness.

The urine is black from the onset and characteristic in its color to such an extent that the patient is always impressed by it; it is abundant and frequent, of a brownish black aspect only during the paroxysms; later the urine is again strongly colored, but is no longer black; it may contain at this stage a little bile; it never does at the start; it is scanty at times, but never suppressed, excepting a few hours preceding death.

The urine at the start is red, clear and simply feverish; it is limpid and scanty; later, if the disease grows worse, the urine is thick and turbid; it becomes more and more scant; finally a complete anuria often takes place one or two days before death.

Probably parotiditis have been observed rarely and accidentally, where prolonged doses of calomel, causing a stomatitis, had been employed. I have knowledge of only one or two cases of this kind in over three hundred observations, and the relation existing between cause and effect has been easily established.

Parotiditis is very frequent at the end of the disease.

Following Feraud, we have in two hundred and sixty-eight cases (268), one hundred and twenty-four (124) mild cases with no death, sixty-four (64) severe cases, with thirteen (13) deaths, fifty nine (59) grave cases with thirty-two (32) deaths and twenty-one (21) pernicous or siderant cases with twenty-one (21) deaths.

Unfavorable symptoms are a very violent chill, nervous symptoms of all kinds, and irregular or delayed appearance of the jaundice, the continued dark color of the urine with diminution in quantity, the occurrence of large numbers of casts composed of the detritus of the blood corpuscles.

Persistent vomiting, black vomit, intense lumbar pains and continued hiccough; Feraud looks upon the latter as an especially unfavorable symptom.

Treatment.—I have been somewhat criticized in regard to the size of my doses of quinine in this disease; my limited experience and the literature of the subject have convinced

me that quinine is the only remedy that has any controlling effect, and that it should be given in large doses. It is as near a specific as we possess in medicine in its controlling influence in all the malarial group; all other medicines can only serve us in controlling symptoms, and are consequently secondary.

To show the effect of the quinine treatment in contrast to that of calomel, I introduce the following table of Feraud:

	Cases.	*Deaths.*	*Per cent.*	
a	71	22	31	Quinine in very small doses, calomel purgative.
d	11	4	36	Quinine in very small doses, calomel and other purgatives as the base of treatment.
e	42	13	31	
f	30	9	30	
b	40	8	20	Quinine in medium doses, calomel in small doses.
c	29	5	17	
g	27	3	17	
h	18	2	11	Quinine in large doses.
i	18	0	0	

In the group of eighteen cases under "H," one of the deaths was due to a pernicious or siderant and the other to an inter-current pernicious attack.

Dr. Norcum reports eleven cases with one death, which occurred one hour after he had seen the case, his treatment being large doses of quinine and hypodermics of morphia.

Feraud's treatment consists in giving an evacuant (including in this term an emetic or a laxative) in the early stage of the disease, if the patient's strength is good, but he often relies entirely upon quinine.

In regard to calomel he says: "I should like to see it disappear from the pharmacopœia of the hot countries." He not only looks upon it as useless, but even harmful, and after a long and close study of the subject finds that a course of mercurials is a decided predisposing cause of the disease in question.

I should advise, as soon as the case is diagnosed, a sufficient dose of quinine to cinchonize the patient, say thirty (30) grs. in solution or its equivalent hypodermically, and this state of cinchonism should be kept up by smaller doses as long as the disease lasts. In this disease the stomach is so irritable that it cannot be depended upon, and we are compelled, at least in severe cases, to depend entirely on rectal and hypodermic administration of both food and medicine.

In regard to the symptomatic treatment, I look upon morphia as second to quinine; the hiccough and vomiting, both most distressing symptoms, can be better controlled by morphia than by anything else. I have given all the ordinary remedies a most thorough trial in this vomiting, and must confess that in severe cases I cannot recommend any of them.

Inhalations of nitrite of amyl will control the hiccough at any time, but its effect is so transient that in the long-run I fear it does us no good; for the abdominal pains hot poultices rank next to morphia. I cannot advise blisters, as thus far I have seen no good result from the use of them. Theoretically I cannot see how they can be of any benefit; practically they increase the suffering of the patient to a great extent.

Stimulation by alcoholics or digitalis must be free in proportion to the severity of the case.

Alimentation is imperative, and in the severer case will have to be almost exclusively rectal.

In convalescence we have a condition of profound ænemia, and I find the following combination very successful in its effect:

℞. Strych. Sulph.....gr. i
Acid Arseniosi.....
Hydrarg. Bichlo.....aa gr. ½
Quinia Sulph.....ss
Ferri Lactas.....aa ʒi
M.
Ft. Pill. No. 60.
S. One after each meal.

A change of climate must be insisted upon.

CONCLUSIONS.

First. That this disease is purely malarial.

Second. That the jaundice is not dependent on impairment of the hepatic functions, but on the coloring matters of the blood following the disintegration of the red blood corpuscles.

Third. That quinine is the only medicine which has any controlling influence on the course of the disease.

Since the conclusion of this paper, I have received the fourth volume of Pepper's System of Medicine, in which there is an article on malarial hæmoglobinuria by Dr. James Tyson; his experience is confined to mild cases entirely; his conception of this disease coincides so much with mine that had his article been in the first instead of the fourth volume of Pepper's System, I should have selected some other subject for my paper before this body.

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Reviews in the *American Journal of Sciences*, Vol. xix., pages 163 to 176.

Treatment of hæmorrhagic malarial fever (monograph), by Thomas J. Turpin, M. D., Forkland, Alabama, 1881.

Hæmorrhagic malarial fever as it occurs in Alabama, by Jerome Corchran, M. D., *Journal of the American Medical Association*, Vol. iv., No. 22.

[NOTE.—Last winter I addressed some questions to Dr. A. W. Reyes, editor of *El Eco Cientifico de las Villas*, and one of our best known Spanish American Scientists; the answers occur in *El Eco* of February, 1886, which came to hand too late to incorporate in this paper.]

The first question was in regard to etiology, which has been pretty thoroughly settled. The second is as follows: "Does the profession in Cuba use quinine in malarial hæmaturia? Do they use calomel? Answer. Amplifying Dr. McHatton's question, we will say that what has been published in regard to paludism, hæmaturia and quinine is found in "Corre Fiebres bilieuses et Typhigues des pays chauds," Paris, 1883.

Dutroulan and Collin speak of bilious hæmorrhagic fever in their respective papers. Benoit's important monograph was published in the fourth volume of the *Archives de Medecine Navale*, in 1881; in said Archives there is a work by Corre on the same subject, and in the *Gazette* of the hospitals of Paris of 1872, there is an observation by Primet, on a case of pernicious hæmaturia treated with happy result by large doses of quinine.

In regard to calomel, here it has been much used (we gave it in our first observation on las fiebres de borras); in other times in the treatment of paludal fevers *until the quinine treatment came to throw to the ground all others.* H. McHATTON.]

A REVIEW OF MODERN ANTISEPTIC MIDWIFERY.

By EUGENE FOSTER, M. D., Augusta, Ga.

In no department of medicine can we find a more striking illustration of the fickleness of medical opinions, nor a more valuable and instructive lesson to the seeker after truth, than is presented to the mind of him who patiently, laboriously, and intelligently investigates the literature of puerperal febrile diseases. The literature of the subject reaches thousands and tens of thousands of pages, and after spending months upon months in close and intelligent study of these diverse and voluminous papers, the student rises from his task fully satisfied that writers who have attempted to solve the problem have but rendered "confusion worse confounded."

It may be humiliating to our pride, but the fact remains, that we know to-day absolutely nothing more of the essence of these diseases than was so imperfectly conjectured fifty years ago.

The physician asking himself, as any conscientious man must do, what shall be his rule of conduct in the practice of midwifery, finds himself in a truly embarrassing position. In the whole service of his life he is called upon to minister to disease except in the lying-in room. Here he is called upon, not to treat disease, but to supervise a purely physiological process. His duty is solely to ward off hidden dangers and to assist incompetent nature. Do what he will, bad cases will come upon him, which neither forethought, care nor skill can avert—cases in which, although every

possible caution and due skill be exercised, disastrous results follow, and, by the innuendoes or misrepresentations of the mean and vicious, the physician is made to suffer in mind, reputation, and if a jack-legged lawyer be handy, in pocket, if he has anything therein. The responsibility of the accoucher is greater at the present day than ever before in the history of medicine. A latter-day gospel is being preached by eminent text-writers in our profession, who, in the language of Dr. T. G. Thomas, of New York, say, "The woman who is to bring forth should be treated as though she is to go through a capital operation in surgery." Dr. Thomas further said that "in private practice, even among the wealthy, there is a laxity of system and a carelessness with regard to preventive measures which borders closely on criminality." He then insists upon the necessity of executing a system of prophylactic measures, with a dogmatism which is lamentable indeed. These will be reviewed in the course of this paper.

Dr. Thomas in this paper said, in regard to the pathology of the disease, he believed that "puerperal fever, in whatever form it might show itself, was puerperal septicæmia; the cause of the affection being the absorption of a poison by solution of continuity in the genital tract, and that there were only two methods by which it could be introduced into the system. These were, first, through the atmosphere, and, secondly, by the contact of the hands of the physician or nurse, sponges, instruments, cloths, clothing, or bed-covering with the genital tract."

Dr. William T. Lusk, in his "Science and Art of Midwifery," the authoritative text-book in America, plants himself squarely upon the identity of surgical septicæmia and puerperal fever, and highly endorses the same antiseptic precautions in midwifery as are used by Lister in his surgi-

cal practice. He says: "The great improvement in maternity patients in recent years has been due to the application of Lister's principles to obstetric practice."

The great and learned medical school of Harvard impresses upon its students the absolute necessity of antiseptics in all obstetric cases, both normal and abnormal. Other teachers impress their students with these views, and as these young men graduate and go into practice they become preachers of this system, and are ready to criticize as an old fogy the physician who holds on to the good old way.

The journals are literally full of papers advocating Listerism in midwifery, and scarcely a writer is to be found who dares to attempt to stem this current of professional opinion. The position of the accoucher is quite disagreeable if he cannot fall into line with this latest medical fashion. If he fails to follow the fashion of using antiseptic precautions in all cases of accouchment, and his patient unfortunately has fever, he is charged with "carelessness which borders closely on criminality."

Dr. Thomas in his paper properly said, "Every scientific paper ought to be challenged for its *raison d'etre.*" This I propose to do in the following remarks. I shall attempt to demonstrate that the antiseptic system is founded upon speculation pure and simple; and, furthermore, that this antiseptic system, as a routine practice, is, in its essential features, unscientific, unsuccessful, unnecessary and frequently directly harmful to the lying-in woman. The facts upon which my argument is based shall be taken almost exclusively from writers who are, or have been, advocates of the antiseptic system.

Permit me now, as briefly as possible to an intelligent presentation of the subject, to call your attention to the theories of the most prominent writers as to the essential nature of

puerperal fever. Mark you, theories! for each one is a matter of unadulterated guess-work. I shall not attempt to state every theory which has found advocates in our profession in the past. I shall content myself with reviewing the four prominent theories of the present day. An examination of the literature of the subject will convince the student that there is greater diversity of opinion among writers as to the nature of puerperal fever than exists in regard to any other disease in the whole catalogue.

Let us now examine these theories and ascertain if or not my statement be true or false, that the antiseptic system of midwifery (Listerism, in other words) is in its essential features unscientific, unsuccessful, unnecessary and frequently harmful to the lying-in woman in normal labor. I propose, gentlemen, to discuss this question from the standpoint of accouchment in the homes of the people—not in hospitals, which are but too often only elegant mausoleums to the mistaken philanthropy of the donors There is no analogy whatever between puerperal fever in private practice and hospital experience as to the modes of infection and the necessity for prophylaxis.

1st. Is the antiseptic system unscientific under the theories discussed? Let us see:

Take the theory of Dr. Barker, that "the disease is an essential fever, not dependent on local lesions nor local inflammations, nor absorption of dead matter, either autogenetically nor heterogenetically, nor specific poisons of the exanthemata." Dr. Barker himself says antiseptic, vaginal and intra-uterine injections cannot be recommended with safety as a routine practice in normal labor. He says distinctly that not two per cent. of cases of puerperal fever are caused by absorption of putrescent matter from the genital tract. Indeed, he is one of the few men in America who has

had the courage to declare his conviction that the antiseptic system of midwifery is unnecessary and frequently harmful to the parturient woman. During two years he has never used antiseptics in obstetric practice, and during that period "he has not had a single case of labor, including instrumental deliveries, which, during the puerperal period, has given him any anxiety whatsoever." So much for Dr. Barker's theory.

2*d. Semmelweis' Theory.*—Not being familiar with the German language, I take from his followers and admirers their statement of his theory. "In 1847, Semmelweis contended that this fever (puerperal) was caused by contact with the genital tract of hands of physicians who were fresh from *post mortem* examinations." It was very soon attacked and ridiculed, and the obstetricians of the lying-in hospitals demonstrated the fallacy of this theory. In 1860, he amended his theory, and contended that "puerperal fever results always from the absorption by the abraded genital tract of decomposing animal matter, and it may be autogenetic or heterogenetic—*i. e.*, by absorption of her own decomposing debris or coagula, or cadaverous poison from without; and from this absorption will develop, according to the virulence of the toxic agent, the location of the absorbing surface, and the vital resistance of the patient, the local lesions known as puerperal aceidents The most grave form will necessarily be the heterogenetic, absorption taking place at the time of labor from contact with poisoned hands of doctor or nurse, tainted dressings, even the healthy discharge from the vagina and uterus from the patient herself, allowed to remain long enough, without removal by constant cleansing, to begin to decompose in contact with the warm body of the parturient, and, what is often overlooked, when every other precaution is scrupulously observed, from

a return to the vulvar orifice of a hand not sufficiently cleansed from the last 'touch,' or the second use of a napkin, even but slightly soiled by blood and mucus." This is Semmelweis' theory as given by Dr. A. H. Smith in his address as President of the American Gynecological Society, Chicago, September 30th, 1884. Semmelweis and his followers claim that auto-infection is extremely rare, but insist upon the great frequency of infection through contact of the hands of the physician and nurse with the abraded genital tract. If debris or clots be the disturbing element, certainly unmedicated water will wash them away. If the physician and nurse are so liable to poison the woman, as is claimed by these gentlemen, it would be far better for her did she go into the desert and, there, amid its loneliness, gloom and desolation, bring forth her young, rather than trust to the perils of contaminated hands and instruments of the doctor. It has been observed that the savage woman, when taken in labor, leaves her hut, goes into the bushes by a running stream, and all to herself has her baby, and after labor is completed takes herself and babe into the stream, washes both, and returns to her abode. In this she seems to be wiser far than her civilized sister. This is the only theory under which rigid antiseptic midwifery can be advocated. But absorption through abraded surfaces in the genital tract is not always necessary to the production of puerperal fever, for puerperal fever is, by common consent of all observers, found in existence just prior to and during delivery. Again, under this theory puerperal fever is identical with surgical septicæmia, and is it not admitted by all surgical writers that pyæmia and septicæmia occur from spontaneous suppuration in the internal organs? These gentlemen claim that puerperal fever (septicæmia) is to be prevented by applying the same rules as those observed

by Lister for preventing surgical septicæmia, and yet, by using vaginal antiseptic injections after labor, they violate one of the cardinal principles of modern antiseptic treatment of wounds, for in surgery the wound is closed, covered with a compress, and never disturbed for days unless the wound is doing badly. The aim of the surgeon, even under Listerism, is to secure drainage, and keep the wound at rest by avoiding renewal of dressings. No surgeon, believing in or practicing modern antiseptic surgery, would even think of opening the wound and injecting disinfectants into it every four or eight hours. This antiseptic system, under Semmelweis' theory, ignores such factors in disease-production as vital force, race, age, constitutional idiosyncrasies, constitutional condition, mental state, diet, and hygienic surroundings. These allowances are made for other diseases. Why not for this? Dr. Robert Barnes, obstetric physician to St. George's Hospital, London, truthfully says: "So far as antiseptic appliances are concerned, they can strictly only be regarded as subsidiary means in the carrying out of the great principle that lies at the bottom of all good obstetric practice, namely, to screen the lying-in woman from those poisons and other noxious influences which threaten her from within and from without. . . . The essential thing is, to take such a large view of the physiological and pathological process as will give the right indications to call upon each and all of the therapeutical agents at our command. To fix the mind too intently upon any one of those agents is to incur the danger of neglecting others, and of losing sight of the principle which ought to guide the application of all as one force directed to one end. . . . The foundation of puerperal disease is laid during gestation. With the completion of labor, the conditions predisposing to disease gather strength. During the puerperal state fresh

elements of danger accumulate. All these three states bring their contingent to the development of every puerperal disease."

Take Pasteur's Theory.—"Puerperal fever is the result, absolutely and necessarily, of the presence of micro-organisms entering the circulation through the open surfaces of the parturient canal, and the sound mucous surfaces of the lungs and the intestines." Is it a scientific procedure to so carefully guard the genital tract from infection, when under this theory the micro-organisms may enter through the lungs and intestines? I think not. It is well, just here, to remember that Pasteur says, positively and unqualifiedly, that "no germ can enter a healthy body; that the blood in health is firmly closed against it."

Take Dr. Hick's Theory.—According to English and American text-writers, he says distinctly that "puerperal fever is the result of the entrance of scarlatinal and other exanthematous poison *through the lungs*, and the development of its own proper type in the woman after delivery." Under this theory, what earthly spot can Listerism find as an abiding place in midwifery?

Take Dr. Kinkead's Theory.—"That all the miasmatic and zymotic diseases are interchangeable into puerperal fever." If this be so, of what earthly avail can hand-washing, antiseptic, vaginal and intra-uterine injections prove to prevent puerperal fever? While busy with guarding the genital tract from infection, the poison enters through the lungs and commences its sad havoc. It would certainly be asking too much of our innate credulity to believe that it is necessary for the poisons of scarlatina, diphtheria, etc., to enter the system through the abraded surfaces of the parturient canal, when we know, without the shade of a shadow of doubt, that in nine hundred and ninety-nine

cases in one thousand, in general practice, these diseases occur where no abrasion is to be found in any portion of the body.

But admit any one, or every one, of these theories to be good and true, I claim that the antiseptic system has been unsuccessful in preventing puerperal fever. Unfortunately there are little if any statistical data in private practice known to us from which a comparison of the antiseptic and non-antiseptic methods can be made. I am therefore forced to place my position at the great disadvantage of depending almost entirely on the results in hospitals. I shall not shrink from the task of attempting to demonstrate that even in hospitals the antiseptic methods have been unsuccessful.

A few examples must suffice, but I could detain you for hours in recital of the failures of antiseptics in public institutions.

I claim distinctly that in epidemics of puerperal fever, there are occult epidemic constitutions of atmosphere, either local or general, which produce these epidemics in recurring cycles. Watch the march of an epidemic of puerperal fever and this will generally be its course. In its genesis it travels slowly, and the disease is not very fatal; after reaching a given point, its course is wide-spread, and the intensity of the poison is shown by the great fatality among those contracting it; when the acme is reached it will be fully ten times as general and fatal as at its beginning or ending. Suddenly, then, the decline begins and finally the exodus comes, and for a longer or shorter time the disease is scarcely known until the recurring cycle again starts it to an epidemic. Take a hospital in which an epidemic has reached its crisis and begin your antiseptic methods; the mortality at the time it was begun being 10 per cent. of all deliveries, the mortality

declines to 1 per cent. or 0.50 per cent, and, according to the preachers of the gospel of Listerism, the antiseptics did the work. I shall attempt to demonstrate that the same results would have followed if the non-antiseptic method had been used.

Of all the hospitals whose statistics are quoted and lauded to prove the efficacy of antiseptic midwifery, that of the Rotunda Hospital, Dublin, Ireland, is the one particularly above all others. I therefore take the experience of this hospital and shall demonstrate to any impartial mind that all the facts, taking them over a long series of years, demonstrate the utter futility of antiseptic midwifery. We are told, and expected to believe, that the antiseptic method has reduced the mortality of puerperal fever in various hospitals (the Rotunda among them) from 10 per cent. to 0.55 per cent. Let us see if this be true. For one hundred years, ending 1854, *the total mortality from all causes* in the Rotunda Hospital was 1.21 per cent. But we find a wonderfully small mortality at various periods. Thus, from

1781 to 1786 (7 years)	the mortality	was	0.76	under	Dr. Rock,
1794 " 1800 (7 years)	"	"	" 0.75	"	Dr. Evory,
1826 " 1833 (7 years)	"	"	" 0.96	"	Dr. Collins,

for the entire period, but for the last four years of his (Dr. Collins') mastership, 1829–1833, there was not one death from puerperal fever. From 1848 to 1854 (7 years) under Dr. Sheckleton's mastership, the total mortality from all causes was 1.85 per cent. Divided as follows:

1847, 17 cases in 242 deliveries, or 7.02 per cent., or 1 in 14.23.
1848, 33 cases in 1,823 deliveries, or 1.81 per cent., or 1 in 55.2.
1849, 37 cases in 2,068 deliveries, or 1.79 per cent., or 1 in 55.7.
1850, 17 cases in 1,982 deliveries, or 0.85 per cent., or 1 in 114.0.
1851, 14 cases in 2,070 deliveries, or 0.67 per cent., or 1 in 147.8.
1852, 11 cases in 1,967 deliveries, or 0.56 per cent., or 1 in 178.0.
1853, 17 cases in 1,926 deliveries, or 0.88 per cent., or 1 in 113.3.
1854, 19 cases in 1,679 deliveries, or 1.13 per cent., or 1 in 88.3.

From 1870 to 1876, inclusive (seven years), Dr. Johnson, of Rotunda Hospital, reports the total deliveries 7,860, total deaths 169, of which 85 or 1 in 91 were from puerperal fever.

From this same hospital Dr. Macan, Master, reports for 1883, 1,090 deliveries with six deaths from all causes.

Now let us inquire what antiseptic precautions, *i. e.*, Listerian, were used during the above-named period; none whatever are mentioned except 1883. Let Dr. Collins' own words describe his method: "The beds are composed of straw, nor is any one of them used more than a second time without the cover having been washed and the straw renewed. In every instance where the patient dies, this is at once done, and should the most remote symptom of fever have been present, every article connected with the bedding is instantly scoured and stoved; the wood-work and floor washed with the chloride of lime solution, and the entire ward whitewashed." To these precautions, with strict attention to ventilation, he attributes the complete disappearance of puerperal fever. Dr. Johnson insisted on cleanliness and thorough ventilation. Dr. Macan (1883) banished students who were dissecting, and required the enforcement of this rule: "No one shall make a vaginal examination without first having washed their hands in carbolic acid solution, using a nail-brush carefully." "If laceration of the perineum has occurred, the vagina is injected with carbolic acid solution (1 to 40) or corrosive sublimate solution 1 in 2,000, and if the hand has been introduced into the uterus, it is also washed out with a similar solution. If operative interference is necessary the external genitals are carefully washed and the vagina irrigated; after completing the operation the uterus is also syringed with the antiseptic solution and ʒ iss. of iodoform

is passed to the fundus and left there. In normal labor he never allows any prophylactic antiseptic injections, whether vaginal or uterine, not considering it even necessary to use an antiseptic solution for washing the external genitals, which is done twice daily with plain, warm water." "If the lochia become offensive and the temperature not only becomes high, but remains so for 24 to 36 hours, then intra-uterine antiseptic injections should be made and an iodoform pessary introduced."

We can derive valuable information from the Vienna Hospital, where marvelous results are attributed to the practice of antiseptics in midwifery. I take the following from Dr. Lusk, who believes in antiseptics. He says: "It is familiarly known that after Semmelweis had introduced the practice among the physicians attending patients at the large lying-in hospital at Vienna of washing the hands in a solution of chloride of lime, there was a great diminution in the mortality which prevailed, notwithstanding which Braun reports, however, that in 1857, in the month of July, in 245 deliveries there were 17 deaths. The following month Professor Klein gave orders to suspend the use of disinfectants. By chance in August there were only 6 deaths out of 250 confinements, and in September of 275 patients none died. From 1857 to 1860 the mortality was slight, though disinfectants were not used, while during the three following years, in spite of the persistent and systematic employment of those agents, the death-rate once more assumed formidable proportions."

To be entirely fair, I will quote the statistics from the Vienna Hospital, given by Dr. W. L. Allen, in *Medical Record* of January 21st, 1884, as follows:

1839 to 1849 (10 years), 42,105 deliveries, mortality 8 per cent.
One year, 1842, the mortality reached 16.90 per cent.

1849 to 1863, 57,569 deliveries, mortality 3.60 per cent.
In 1854-5-6 (3 years) of this period the mortality reached 9.10 per cent.
1863-1879 (16 years), 61,949 deliveries, mortality 1 60 per cent.
1881-82 the mortality was 0.60 per cent.

Well, is not this convincing proof of the inestimable value of antiseptic midwifery? I answer unqualifiedly, no. Dr. Carl Braun (1881), the chief obstetrician, who was almost raised in this hospital, claims that the introduction by him, in the summer of 1863, of Boehm's system of heating and ventilating effected a sudden and marvelous improvement of the hospital. He also said: "I have now, from practical experience, arrived at the knowledge of the fact that the rapid and thorough prevention of putridity by adequate ventilation is to be regarded as a good preventive of puerperal fever; that it is not the number of patients in a lying-in hospital, nor yet the number of patients in a single room, but the deficient circulation of air, a fault which may inhere to separate compartments in the smallest maternities, which is the important feature in the spread of puerperal fever; that puerperal women are to be protected from child-bed diseases, not by isolated buildings and gardens, nor by walls, but by the permanent introduction of great quantities of pure, warm air. After I had attained the salubrity of my clinic, by the construction of a very good heating and ventilating apparatus, a new era for lying-in hospitals was opened."

So, gentlemen, if Dr. Braun, the chief physician in charge, knows anything about the matter, antiseptics had but marvelously little to do with the reduction of puerperal fever in the Vienna Hospital. But suppose Braun was mistaken. Even then it would be extremely unfair to attribute the results to antiseptics. From 1849 to 1863 the average annual mortality was 3.60 per cent.; 1863 to 1879 it was 1.60 per cent. Do the records of this hospital show that this

experience was never had for like periods prior to use of any antiseptic methods whatever? Certainly, from the arguments of the advocates of antiseptic midwifery, it would seem that this hospital had never known such results until Semmelweis introduced his disinfectant system in 1847. Well, Semmelweis shall be called as my witness. "Semmelweis showed from the records of the hospital that from 1784 to 1823 there had been twenty-five years during which the mortality did not reach 1 per cent., and 4 per cent. had only occurred once during the whole period of forty years." During this forty years no antiseptic system whatever was operated in this hospital.

Well, how about "Preston Retreat," Philadelphia, Pa, under the management of Dr. Goodell, where only 3 deaths in 1,021 deliveries occurred under the antiseptic system? Thank you for the query. Antiseptic had nothing whatever to do with it. Dr. Goodell says: "I am governed by four golden rules—cleanliness, ventilation, rotation and isolation. By isolation I mean putting a hospital patient in a condition like as possible to that which she would have at home. If the same sponge, the same chamber-pot or the same syringe be used by several patients, this law of home environment is violated, for every woman delivered at home has her own sponge, her own syringe and her own vessel." Of his hospital he says: "Hence, every bed is provided with its own vessel, and hence every woman's person is sweetened, not by detergent vaginal or intra-uterine injections, but by the upright position, making her get out of bed and slip into a chair several times a day." Dr. Goodell and the nurse wash their hands in carbolized soap, the nurse using the nail-brush. So, gentlemen, the followers of Sir Joseph Lister, Bart., are welcome to the chilly comfort which Listerism received at Dr. Goodell's hospital. I know not what Dr.

Goodell's practice is to-day; but this I venture to assert, *i. e.*, if he uses the modern antiseptic system of midwifery I challenge you to show an equal success with that which he had prior to its use.

Well, they say, look what Stadfeldt did at the Maternity Hospital at Copenhagen by antiseptic midwifery. Well, didn't he do wonders? With every possible antiseptic precaution—even delivering women under the antiseptic spray—his mortality was 1 in 87 of all deliveries. Turn back and compare his results with those at Rotunda Hospital, and at Dr. Goodell's Hospital, and for forty years in Vienna Hospital.

Bischoff, of the Maternity, of Basel, used most rigid methods of antiseptic prophylaxis, and yet in 1871 his mortality was 1 in 62; in 1872, 1 in 38; 1873, 1 in 92; 1874, 1 in 72; 1875, 1 in 102 deliveries. Compare his results with the non-antiseptic experience of Rotunda Hospital for one hundred years, and decide for yourself his magnificent success.

Well, come nearer home. Suppose we take the New York Maternity Hospital, and let Dr. Garrigues, the obstetric surgeon to this institution, tell us something about the marvelous results of antiseptic midwifery there. He says: "I myself have used carbolic acid regularly for the last eight years for my hands and instruments, for vaginal injections twice daily during the first week of delivery, for washing out when indicated, either as a prophylactic or a curative measure, and for covering the genitals in the lying-in period." He then gives the following statistics from that hospital: "1875, mortality 2.67; 1876, 3 73; 1877, 6.67; 1878, 3.11; 1879, 4.40; 1880, 5.37; 1881, 2.36; 1882, 3 25."

Dr. Garrigues then adds: "The present year, 1883, will show as bad a record as any on the preceding list. Of 345 women delivered during the first nine months of this year, 30 have

died. . . . During the six months, from October 1st, 1882, to March 31, 1883, in which I was on duty last, 192 women were delivered, and 47 of these, or almost 1 in 4, were seriously sick; 39, or almost 1 in 5, of inflammatory puerperal diseases. . . . When I went on duty, on October 1st of this year (1883), the condition of the hospital was at its worst, nine women having died during the last month, and half a dozen seriously sick, puerperæ being left over from the preceding service, one of whom died a few days later." Dr. Garrigues began thorough ventilation of wards, rotation in use of rooms, and then applied his antiseptics outside of the vagina in normal labor, using only an antiseptic pad covering the vulva, coupled with disinfection of hands and instruments, when he had 97 deliveries without a death.

Dr. Lydston, of Chicago, read a paper before the Chicago Medical Society, May, 1884, in which he gave his experience as resident surgeon at Charity Hospital and the Maternity Hospital, New York—his statistics giving even a more frightful mortality than given by Dr. Garrigues. "From August, 1880, to December, 1880, there were confined in the Maternity proper 50 selected cases. Of these, 5 or 10 per cent. died of puerperal metritis, septicæmia, or peritonitis. In the waiting wards, during the same months, there were confined 72 cases, also selected. Of these, 6 died, only 3 of which, or about 4 per cent., died of septic infection. During October and November the writer delivered, in the waiting wards alone, 25 women, of whom 1 died, and she of extensive heart lesions and pulmonary œdema. During these same months 30 out of the 50 cases cited from the Maternity Hospital records, 5 fatal cases occurred, making a mortality for the two months of 16.66 per cent. from septicæmia at the Maternity proper. . . . The grand total for the waiting wards and pavilions from August, 1880, to April, 1881, was 202 de-

liveries, with a mortality of 12, only 5 of which, or 2½ per cent., were due to septicæmia or puerperal fever. Of 130 cases, the let-alone plan of treatment was more rigid than his own, vaginal injections not being allowed. From April, 1881, to April 1882, 423 cases were delivered, with but 2 deaths from puerperal fever. The treatment of this series was also non-interference." Dr. Lydston then says "he has seen the temperature rise and pelvic inflammations follow the use of frequent vaginal injections." He then gives his experience while resident surgeon in the New York State Hospital for Emigrants, where the deaths from septicæmia were in the minimum. "A year since a so-called 'reform' was instituted there in the emigrant service. The prophylactic injections and complicated manipulations were introduced, with the direct and immediate effect of increasing the mortality rate, which became alarmingly high. Simultaneously on Ward's Island there were a large number of Russian Jewish refugees, who were filthy and mentally depressed. 90 of these women were delivered without a death. There were numerous forceps deliveries, but there was absolute non-interference in the after-treatment. Here was a good opportunity to compare fancy-midwifery results with the let-alone method." If these be the demonstrations of the marvelous results of antiseptic midwifery at the great metropolis, I beg to be excused from joining the coterie of fashionable accouchers.

What has been the experience with antiseptics in midwifery at the Philadelphia Hospital? Dr. Theophilus Parvin read a paper before the Section of Obstetrics, American Medical Association, May, 1884, in which he says: "During the first three months of 1884, of 72 deliveries in the hospital 20 had septicæmia, *i. e.*, 1 in every 3¾ deliveries, and 3 died, *i. e.*, 1 in less than 11 deliveries. During this period disin-

fectants and antiseptics were freely used." He further says that "in the cases where antiseptic vaginal injections had been used the patients were, in his experience, just as liable to have septicæmia, if not more so, than those in which no vaginal injection had been used." He sensibly attributes to over-crowding, deficient ventilation, etc., this frightful epidemic.

I have recently been asked, "Well, how about the Maternity Hospital, Paris, where the mortality has, under strict antiseptic midwifery, been reduced from 10 per cent. to the mortality usual in the best private homes. I gladly take the Maternity as illustrating my proposition?" In the first place, 10 per cent. is double the mortality claimed by Prof. Tarnier. At the International Medical Congress, 1885, he said, "in 1865, the mortality was about 5 in 100; to-day it was reduced to 2 in 100." He nowhere says in this discussion that 5 per cent. was the usual mortality prior to 1865. In the next place 2 in 100 is not the mortality in private practice; even where antiseptics are ignored, 1 in 120 in private practice in Paris is the mortality. In the same paper Tarnier says that while the mortality in the Maternity Hospital was 2 in 100, in the Pavilion it was only 0.75. Well now, how comes this vast difference between the mortality in the two institutions? Certainly not by the antiseptic methods, for they are exactly the same in both. The secret is that in the Pavilion the patient enjoys the seclusion of a private home; in other words, she enjoys the inestimable privilege of being "put in a condition as like as possible to that which she would have at home," to use the words of Dr. Goodell. Again, Tarnier's mortality of 2 in 100 is 0.79 greater than the mortality of Rotunda Hospital for 100 years, and double that of the Vienna Hospital for twenty-five years, during which antiseptic midwifery was not used.

Again, Tarnier does not carry the antiseptic methods to the ridiculous extent that is advocated by a majority of the advocates of disinfectants in obstetrics. The ceilings, floors and walls are not washed except as necessary. The mattresses, pillows, etc, are stuffed with chaff, and after being used by one patient are emptied and washed. "Whenever I had reason to think my hands were '*suspicious*,' either at the hospital or at home, I washed them in the bichloride of mercury solution." His assistants did likewise. The catheters are kept in carbolic acid solution. In order to prevent the implantation of germs in the air into any wound produced at the moment of expulsion, he requires the midwife to anoint the fœtal-head with a one-tenth solution of carbolic acid each time it appears at the vulva. The washings are done with carbolic solutions. He "never uses vaginal or intra-uterine injections unless the case is not doing well."

In order that we may keep before our eyes the results of midwifery in private practice, which has been done without the antiseptic method, the following statements are quoted:

Dr. Baruch, of New York, says from the records that "the mortality from puerperal fever, even when all allied affections which may be grouped under this common nomenclature are included, is less than two-thirds of one per cent." In his private practice he had not lost a patient with puerperal fever in 900 deliveries. Dr. Garrish stated that "in 4,000 deliveries he had only 2 deaths from puerperal fever under strict cleanliness alone."

Dr. White said that "in 2,000 cases of labor in his practice he had not had a death from puerperal fever, in spite of the fact that among his private patients his order to use vaginal injections after the second day was 'more honored in the breach than in the observance.'"

Dr. J. Taber Johnson, of Washington, D. C., claims to

have investigated the history of 2,000 cases of labor among negroes, 500 of which were in his own practice, with a mortality of 4, or 1 in 500. He says: "I have frequently been sickened by odors which came from the beds, and were produced in the rooms of negro patients. I have never seen a single case of puerperal fever in a negro woman in private practice." Any one who has ever attended the negro can testify to her utter and absolute disregard of cleanliness of person or domiciliary surroundings.

In 1856, Tarnier investigated the mortality in private in Paris, and found it to be 1 in 322 deliveries. Le Fort calculated in 1866 that of 934,781 confinements in European cities, there were 4,405 deaths, 1 in 212.

Garrigues gives the following table of deliveries and deaths in the following cities, 1866: Paris, 1 in 120; St. Petersburg, 1 in 112; Dublin, 1 in 86; Edinburgh, 1860 to 1865, 1 in 122; Copenhagen, 1850 to 1874, 1 in 123; all small towns of Denmark, 1857–1866, 1 in 219; Baden, 1864–1866, 1 in 137. Matthews Duncan estimated that in England the mortality from all causes was 1 in 120 deliveries. McClintock calculated the mortality for England and Wales to be 126.

Let us next decide if the use of disinfectants, as a routine practice in normal labor, is unnecessary. In order to a proper examination, it is best to take up Dr. Thomas' rules *seriatim*:

Rule First.—"In all midwifery cases, whether in hospital or private practice, the floor and the ceiling of the room in which the woman is to be confined should be thoroughly washed with a ten per cent. solution of carbolic acid, or a bichloride solution, one to one thousand. The bedstead and the mattress should be sponged with the same solution. All curtains and upholstering should be dispensed with."

Gentlemen, what earthly necessity can there be in a private home for this washing of floors, ceilings, bed and bedding with disinfectants? Is it possible that the room in a private house, in which no contagious or infectious disease has recently existed, is so filled with germs, bacteria, micrococci, etc., as this rule would indicate? If they are present, from whence did they come but from the atmosphere? Is it possible that Dr. Thomas hopes to disinfect the atmosphere of a room by such means? If there is one thing better known than any other in relation to disinfection, it is that it is absolutely impossible to disinfect the atmosphere of an occupied room, for the plain, incontrovertible reason that any disinfectant which can be safely respired by the human lungs is absolutely harmless to the poison of contagious or infectious diseases. Does not every intelligent physician know that thorough ventilation of a room will accomplish its purification, and that in the absence of ventilation, for instance, in the foul wards of a hospital, puerperal fever persisted and continued its deadly ravages in the face of the most vigorous scrubbings with disinfectants, and this method failed to exert the slightest influence in preventing or subduing the disease? The experience of almost every lying-in hospital in Christendom testifies to the absolute inefficiency of such methods. How absurd, then, to put such measures in practice, in private homes known to be free from contagion, when hoisting a couple of windows for a few hours will accomplish the purification of the room It is strange indeed, yet Dr. Thomas utterly fails to insist upon ventilation as a means of prophylaxis.

Rule Second.—"The nurses and physician should take care that all their clothing is free from exposure to the effluvia of septic infection, such as typhus, erysipelas, septicæmia, scarlet fever, etc., and if there has been any exposure in this

direction, all clothing should be changed, and the body should be thoroughly sponged with a saturated solution of boracic acid."

To this rule I have no objection, so far as it is intended to protect the lying-in woman from zymotic diseases. No physician can doubt for an instant that while attending cases of scarlet fever, erysipelas, measles, variola, etc., unless he change or disinfect his clothing, he may convey the poison of these diseases to the lying-in woman. The duty is imperative on the part of the physician to take every reasonable precaution against becoming a bearer of these contagions. If, however, it is intended to contend or intimate that the poisons of scarlet fever, measles, variola, etc., can produce puerperal fever, I most unhesitatingly deny the proposition. The history of medicine, from its earliest period to the present day, shows an unbroken testimony to the fact that measles produce measles, scarlet fever invariably produces scarlet fever, and small-pox originates alone from the virus of small-pox. They ever have and ever will breed true. You cannot gather grapes of thorns or figs of thistles. While, then, I do not believe you can produce puerperal fever by exposing your patient to these diseases, it is our duty to protect our patient from them by all reasonable precautions, for it is as imperatively a duty to protect the parturient woman against measles, scarlet fever, small-pox, etc., as to guard her against puerperal fever.

Rules 3 and 4 will be considered together.

3. "As labor sets in the nurse should thoroughly wash her hands in soap and water, remove the dirt from under the nails, and administer an antiseptic vaginal injection, repeat it every four hours during labor, and keep a napkin wrung out of the same antiseptic solution over the genitals until the birth of the child."

4. "Both doctor and nurse should wash their hands thoroughly with soap and water and scrape the nails, and afterwards soak their hands for several minutes in a solution of bichloride of mercury 1 to 1,000." Most other writers add, "or 5 per cent. solution of carbolic acid, etc., and wash the hands thoroughly in the disinfectant solution every time the hand touches the genitals."

Gentlemen, there is a great deal in this hand-washing and hand-disinfecting which is extremely absurd. Every man should wash his hands frequently and keep his nails clean. Before he examines a woman, and after every examination, he should wash his hands thoroughly with soap and water. Common decency requires at least this much. It is, however, the very height of absurdity to contend that the clean hands of the physician, who has them free from putrefactive contamination, are dangerous to the parturient woman. Tarnier, whose hospital statistics are so boastfully quoted to prove the value of antiseptic midwifery, says he only disinfects his hands "when I have reason to believe them suspicious." According to the advocates of antiseptic midwifery, you cannot even open an abscess, perform an ordinary surgical operation, dress a healthy wound, nor let your hand come in contact with the blood of a healthy patient without religiously disinfecting your hands, lest grave dangers encompass the woman whom you are called upon to deliver. Indeed, you cannot safely touch the genitals of the lying-in woman without religiously disinfecting your hands after every touch, lest you inoculate the woman with her own blood and thereby poison her; and the good old way of thoroughly washing your hands in soap and water is not sufficient. If this gospel of Listerism in obstetric practice be true, well may the doctor in attendance upon a case of midwifery say with Lady Macbeth:

"What! will these hands ne'er be clean? Here's the smell of blood still; all the perfumes of Arabia will not sweeten this little hand. Oh! oh! oh!" And if the parturient woman is surrounded by all the dangers which these gentlemen contend, the doctor called to attend her may well say with Lady Macbeth's physician, "This disease is beyond my practice. . . More needs she the divine than the physician. God, God, forgive us all! Look after her; remove from her the means of all annoyance, and still keep eyes upon her; so good night." Especially should he do so in the light of recent discoveries in bacteriology. These preachers of the gospel of Listerism in obstetric practice have been proclaiming that washing with soap and water for ordinary purposes is of course a good thing, but that the surgeon or obstetrician must go a step further and thoroughly disinfect the hands with solutions either of carbolic acid, boracic acid, chloride of zinc, chloride of iron, etc., if he would have them surgically clean. This disinfection of hands they said was necessary to kill bacteria or the spores of bacteria adhering to his hands, and thus prevent the introduction of micro-organisms into the wounded vagina and causing puerperal fever. This done, your hands were "whiter (from infection) than snow," and might safely be carried into wounds. Many remarkable successes of this prophylactic system have been paraded before the eyes of our credulous profession, and their statements of success being dependent on aseptic hands have been accepted without even a doubt. But now comes Professor J. Forster, of Germany, November 18, 1885, who says: "The hands, after thoroughly washing with soap and water, were dipped in solutions (of various strengths) of carbolic acid, boracic acid, zinc and iron chlorides. They were then immediately protected with sterilized wadding or cloth, and the finger-

point was applied to sterilized, feebly alkaline, neutral or acid peptone—solutions or culture-gelatine. In every case, without a single exception, bacteria developed in these fluids within twenty-four to sixty hours. It was thus found that the ordinary practice of washing the hands in a two-and-a-half per cent. carbolic solution, or even the method recommended by Billroth, of cleaning the hands with muriatic acid and a ten per cent. solution of phenol in glycerine, was not sufficient to prevent inoculation of sterile fluids by the fingers. By washing the hands in soap and water, however, and afterward in sublimate solutions of the strength of 1 to 1,000 or 1 to 2,000, they are made perfectly *pilzfrei* and sporeless and safe."* It is verily the very height of cruelty to sweep away at one fell stroke so much of the valuable statistics of antiseptic midwifery as Professor Forster seems to have done.

But how will you get around the fact that Dr. Routh proved that the epidemic of puerperal fever in Vienna Hospital, 1846–7, was caused by the examinations of parturient women made by students from the dissecting rooms? I would answer by asking this question, How was it that these students from dissecting rooms never caused an epidemic of puerperal fever prior to 1846–7, notwithstanding

*Since the meeting of our Association, I find the following racy reading on hand-cleansing in the *Medical News*, May 22, 1886: "*The Disinfection of the Hands.*—Kummel, of Hamburg, has performed an elaborate series of experiments with a view of ascertaining the best method of rendering the hands of the operator absolutely aseptic. He finds that this result is much less readily obtained if the hands have previously been employed in the removal of bandages or in *post mortem* sections. Under these circumstances the application of corrosive sublimate (1 : 1,000), as recommended by Forster, was found to be inefficient. The conditions which Kummel finds necessary for the disinfection of the hands are:"

"Five minutes' active and thorough washing with soap and a brush in water as hot as can be borne. This is followed by a thorough brushing of the hands with freshly prepared officinal chlorine water, or with a five per cent. solution of carbolic acid, two minutes being given to this part of the process in either case."

the fact that they had previously acted in the same capacity as then, and they enjoyed every opportunity of producing such an epidemic?

But let us put this question of necessity for antiseptics in midwifery to the test of experience of physicians who have not used them. Dr. Lusk examined the mortuary records of New York city for 9 years, 1867 to 1875, and said: "In studying the records of New York city for 9 years, I find, however, that the occurrence of two deaths from puerperal disease (not puerperal fever, mark you), following one another so closely as to lead to the *suspicion* of inoculation, occurred to 30 physicians; a sequence of 3 cases occurred in the practice of only three physicians. . . . . Thus, in the practice of more than 1,200 physicians, in nine years, excluding cases occurring in hospitals, that the *experience of* 36 *only lends color to the idea that puerperal fever is due to criminal neglect on the part of the medical profession.* Undoubtedly in many of these cases, too, the responsibility was only apparent, as when a practitioner has, for example, had the misfortune to lose in one week a woman from puerperal convulsions, and another in the following week from placental hæmorrhage" Gentlemen, this question of two successive deaths in childbed from any and all causes being an evidence of criminal carelessness on the part of the accoucher is a serious matter. Follow it to its legitimate, logical deduction and its absurdity must be apparent. Dr. Gillette recently reported that he had seen two cases of placenta previa in one week, but had not met with a case before in five years. If these women had unfortunately have died in childbed, the evidence, according to the septiphobist's theory, would have been presumptive, if not actually conclusive, that these cases of placenta previa had been caused by Dr. Gillette being in attendance. In my own practice I have

had two successive cases of puerperal convulsions. Fortunately they both recovered, or I might have been charged with having caused the convulsions. But, gentlemen, puerperal fever is a very rare disease in private practice when we take a long series of years. Dr. O. W. Holmes, in his celebrated essay on puerperal fever, published 1843, says: "Dr. White, of Manchester, says, 'out of the whole number of lying-in patients whom I have attended (and I may safely call it a great one), I have never lost one; Dr. Joseph Clarke informed Dr. Collins that in the course of forty-five years' most extensive practice he lost but four patients from this disease.'" Dr. Holmes quotes other similar instances, and the annals of medicine are full of them, but these are sufficient. Certainly antiseptic midwifery was unheard of in those days.

"As labor approaches, the nurse should administer an antiseptic vaginal injection, repeat it every 4 hours during labor, and keep a napkin wrung out of the same antiseptic solution over the genitals until the birth of the child." What for? To kill micro-organisms that may have entered, or are likely to enter, the vagina from the atmosphere; puerperal fever is caused by these micro-organisms; kill them as they enter the genital tract and puerperal fever cannot occur. Now, gentlemen, this is the fashionable theory, and is accepted in many of the text-books, but I wish to say here, and now, that I do not believe one word of it—not one; and I propose to give the reason for my unbelief. Now, bear in mind that I am not denying the existence of micro-organisms in the atmosphere. According to high authorities, the air is literally fully of them. In 24 hours we take into our lungs millions of them. I do not deny that in various pathological lesions, those of puerperal fever included, they are to be found and counted by millions. I am perfectly willing to

admit that "Ogston found 45,000,000 micrococci in one cubic millimetre of pus." But that they are known to be the cause of puerperal fever I unhesitatingly and most unqualifiedly deny. So far as we know, they exist simply as an epiphenomenon. If this statement can be verified the advocates of antiseptic midwifery can no longer charge us, who disbelieve the theory, with criminal negligence. What positive knowledge have we that micro-organisms cause puerperal fever? None whatever. It is speculation, wholly so. Dr. T. G. Thomas, before the New York Academy of Medicine, refused to endorse the theory of micro-organisms as the cause of puerperal fever, but in his address before the New York State Medical Society, one year subsequently, he squarely endorses it, for he says: "If the whole theory of the bacterial origin of puerperal fever is false, then in a quarter of a century from now all precautionary measures will disappear and the old regime will triumph" He had already said that "the only way that the poison of puerperal fever could be contracted was through abrasions of the genital tract." But we are told by antisepticists that micrococci must be the cause of puerperal fever, for they are constantly found in the pathological lesions of this disease; and to prove the identity of puerperal fever and surgical septicæmia, the same microbe is found constantly present in both, and also in diphtheria, scarlatina and erysipelas; the same micrococci being invariably found in both affections, as well as scarlatina, diphtheria and erysipelas, and the fact that surgical septicæmia, scarlatina, diphtheria and erysipelas are directly productive of puerperal fever, the causative agency of the microbe is established to a certainty. The first answer to this proposition is that the same micro-organisms which are accredited with producing puerperal fever are found in large numbers in the normal and pathological

lochia of every parturient woman in the world. The bacteria from normal lochia have repeatedly been injected into animals and with the result of producing the identical results as those from pathological lochia—*i. e.*, ichorrhæmia and septicæmia. Furthermore, the disease thus produced is in itself infectious, and can be continuously propagated in other animals. If an abraded surface be only needful for the entrance of these microbes into the system and consequent generation of septicæmia, how does it ever chance to happen that one woman ever escaped puerperal fever, for wounded surfaces are found in every parturient woman.

Furthermore, chemical irritants (which are absolutely free of microbes or germs) have been introduced into the peritoneal cavity and caused peritonitis, which was infective. Sanderson produced infective peritonitis in rodent animals by injecting undiluted tincture of iodine into the peritoneal cavity. Klein and Dowdeswell made similar demonstrations. "Pasteur's septicæmia, or 'infective peritonitis,' is a disease produced by injecting putrid matter into the abdominal cavity. An inflammatory exudation results, containing numerous micro-organisms, and this exudation, when inoculated in other animals, produces serous effusion, septic intoxication and death." So, then, we see that germ-free chemical irritants produce, when injected into the peritoneal cavity, results identical with those from injection of putrid matter. The experiments of Klein, Sanderson and Dowdeswell prove incontestably that an abraded surface is not necessary to the entrance of septic germs into the interior of the body, for although the chemical irritants used by them were sufficiently strong to kill all microbes, they were found in great numbers in the peritoneal cavity. Undoubtedly these microbes could have only entered the body through the sound lungs or intestinal tract.

Hillier proved that "bacteria, collected from fluids in an advanced state of putrefaction, might, when washed and purified, be introduced into the circulating blood without producing any injurious effect, though proved to be as lively and capable of development as ever." Hillier even inoculated himself with them, and with safety. "Wegner showed that the subcutaneous tissue of a rabbit may be kept distended for days by frequently renewed injections of unpurified air without producing inflammation, and that the effect was not more serious if the same tissue were ventilated for a number of hours by a continous current of air, even when that air was derived from a *post mortem* theatre. When water, charged with septic bacteria, was injected into the peritoneum of a rabbit, in quantity less than two ounces, it produced no effect whatever When the animal was killed, the fluid had been absorbed and the lymphatics of the diaphragm were full of bacteria, but in neither of them, nor in the peritoneum, were there any signs of inflammation. Similarly it was found that when a current of the fluid was passed through the peritoneum for many hours, so that the membrane was exposed for a long time to whatever phlogogenic influences the liquid conveyed, no effect whatever was produced. These experiments with watery liquids are even more conclusive than those with air, for we have here to deal with media, in every particle of which we can readily prove the actual existence of germs in such a state of viability as to only require a suitable soil to insure their development."

Numerous observers, of acknowledged high position in medicine, tell us that even where access from abraded surfaces is cut off from without, these microbes will pass through the lungs, intestinal canal, etc., to the point where dead or dying tissue exists, and there set up putrefaction

and the elaboration of the putrid poison; Sanderson, Klein, Chauveau, Kocher, Dowdeswell, all say so. Pasteur distinctly says these microbes can enter the human system through the sound lungs and intestinal tract. This being so, how childish to attempt to combat puerperal fever by prophylactic antiseptic injections! If decomposing materials exist in the uterus or vagina, unmedicated water will remove them, and quite as successfully as the so-called antiseptics. If any disinfectant is to be useful they must find a blood-disinfectant—*i. e.*, a disinfectant which can be taken into the blood and carried into every part of the body.

Prof. Lusk, in discussing antiseptics in midwifery, says: "Complete antisepsis, in the surgical sense, is, of course, impracticable." Now, sir, there can be no partial disinfection where micro-organisms are to be destroyed. If they be the causal agency of this disease, they must be destroyed absolutely and completely, or there can be no safety. We are told that "every woman who has been delivered is surrounded by an atmosphere of germs which get into the vaginal cavity, into the stomach and the lungs; that these germs are not destructible by boiling nor freezing; that they are watching their chance to enter her system, and when in there, according to Cohn, they multiply at the rate of 16,000,000 in twenty-four hours. And Bar tells us that every microbe requires a special antiseptic, and until we have studied their habits more fully, we have no certainty of any germicide having real value." This being so, and they themselves have said it, and the most learned of them at that, I ask you, in all soberness, what earthly hope of life has the lying-in woman? None whatever. Over the door of every such woman must be inscribed Dante's fearful warning, "All hope abandon, ye who enter here." Do you believe any such scientific speculation?

For myself, I do not believe one word of it under the lights at present before us. How do you account for all this literature in relation to microbes as causal agents of puerperal fever? etc. It is the production of disease. Richardson has written a most learned and excellent work on the "Diseases of Modern Life," but since his book was written, a more modern disease has appeared among mankind, which is rapidly spreading over the earth; particularly have Germany and France caught the infection; there it has assumed violent epidemic proportions and numbers its victims by hundreds, perhaps thousands. This disease is called Microbomania. M. Paul Somans, of Paris, describes it as "an affection of adult or middle age, sometimes attacking those of advanced years. It is most frequently observed among educated physicians, those most given to biological research, and almost always ambitious. It is characterized at the debut by a great desire for notoriety, accompanied by a slight degree of fever and a craving to find certain mobile corpuscles. The desire is soon followed by acts calculated to satisfy the special craving. In the end hallucinations are developed as to the presence of corpuscles in impaludism, measles, scarlatina, even in mumps (and he should have added puerperal fever), and the minute organisms are charged with all the crimes imputable to each pathological individuality. The disease is imitative, and if several individuals under this form of mania should concentrate their attention on one and the same disease, they are very apt to find widely differing microbes." There is, gentlemen, a 2:40 race among would-be Pasteurs and Kochs for discovery of some new microbe. There is rarely a month that passes but we are startled and gratified to find that some mycologist (?) has discovered the special micro-organism of some one or other disease, and that he has found it sure-pop, and here the

pathology and treatment of the disease is builded now to a certainty upon the rock of scientific demonstration. The journals carry the name of the discoverer (?) to the uttermost parts of the earth, and all seems to be swimming finely, when lo! some doubting Thomas insists upon putting his fingers in the hand in order that he may feel the nail-prints, and it turns out that the discovery was no discovery at all How often has the special microbe of diphtheria been found and published to the world, each discoverer claiming a different microbe to be the causal agent, and yet who knows anything satisfactory about the special bacillus of diphtheria to-day? The same is true of scarlatina, measles, malaria, etc.; the special bacillus of these various diseases has been found to be the correct, positive source of the disease, and yet the next so-called discoverer disproves the assertions of his predecessors, and in turn is rewarded by having it demonstrated that he himself knew nothing whatsoever about it. But you say these are the embryo-pathologists who cannot or will not wait for full investigation before publishing their claims, lest some more astute microscopist snatch away their laurels. Not so; even among the highest and most learned of these mycologists (?), Pasteur, Billroth, Koch, and the like, it is but a Kilkenney cat fight, each threatening to annihilate the other. Is this true? Let us take a few examples:

"There are now two distinct schools of schizomycologists, one represented by Cohn, Koch and others, upholding the doctrine that a difference of either form or function is sufficient to establish a distinct species, and that these different species are constant, and do not merge into each other. The other school, represented by Von Nägeli, Billroth, Lankester, and indirectly by Pasteur, contend that these different morphological and physiological forms are merely developmental

phases of the varieties, brought about by external condition of a very few distinct species."

Buchner says anthrax bacillus is simply a variety of the common hay bacillus, and that one may be transformed into the other by special methods of cultivation. Koch, Klein and others say this assertion is unfounded and untrue.

Ogston says that micrococci are present in all acute abscesses—indeed, wherever suppuration is present or imminent, except where it is caused by burns or blisters. Watson Cheyne has examined largely in this field and denies Ogston's assertion

Billroth says he has found a microbe, the hemococcus, frequently in healthy blood. Pasteur denies Billroth's statement and is polite enough to say, "Billroth is an incompetent observer."

Koch claimed to have discovered the bacillus of cholera. The French Cholera Commission went to Egypt to investigate this claim. "This commission reported that micro-organisms were found in vast number and variety in the intestines, among them the bacteria termo and bacilli, some resembling those of tuberculosis, but smaller, others resembling the bacilli of glanders, being the same as were described by Koch. The commission did not believe these could be the bacilli of cholera, because their presence was not constant, and because they were found in other places than the intestines. Attempts to inoculate lower animals with the discharges also failed. All that was accomplished by this commission was to point out Koch's error, and by the death of one of its members demonstrated that copper does not prevent cholera."

Last year the English government sent a commission of learned mycologists into the cholera districts to investigate

the disease. This commission learned nothing whatever of the causal agency of cholera; the only result was that its members negatived every one of Koch's assertions.

At the Paris Academy of Medicine (October, 1883), M. Bouley reported that the microbe of glanders had been captured and cultivated to fifteen generations, then inoculated again, with the production of glanders. M. Colin, an equally competent observer, arose and denied the validity of the conclusions.

Pasteur announced to the Paris Academy of Medicine that typhoid fever is inoculable; M. Colin positively denies it.

In the Society of Physicians, of Vienna, we find a fierce war of opinions as to the bacillus tuberculosis. In this discussion the accuracy of Pasteur's cultivation method is strongly questioned, and the validity of many of his results made a matter of serious doubt. Several speakers contended that the bacillus tuberculosis is always present in tuberculous subjects, and never present in the non-tuberculous. Drs. Spina and Kundrat denied these statements, and cited a *post mortem* examination where the patient's sputum, while in life, were found to contain the most beautiful bacilli of tuberculosis; but the *post mortem* showed that the deceased had only bronchitis and emphysema.

The *New York Medical Record*, October 31, 1885, has the following resumé of the status of the cholera discussion:

> Said Koch: "I've some comma bacilli."
> Said Klein: "I don't think they will kill." "I,"
> Said Finckler (and Prior),
> "Believe he's a liar."
> Said Ferran: "I can knock you all sill I."

Rule Seventh.—Within six or eight hours after the termination of labor, syringe out the vagina with an antiseptic

solution, and introduce a suppository of cocoa butter containing five grains of iodoform.

Eight.—"The vaginal injection should be repeated every eight hours; but in all cases of difficult labor, and in those in which instruments have been employed, they should be administered twice as often (every 4 hours), and kept up for at least ten days." Are antiseptic vaginal injections every 4 or 8 hours necessary to be administered after normal labor? Dr. Thomas insists upon them. While he seems to be quite far ahead in advances of antiseptic midwifery, he does not seem to be conversant with the "backward advances" made by the advocates of this system, or if he is posted he ignores them. The necessity for repeated vaginal antiseptic injections after normal labor was as strongly insisted upon for years as any other part of this complicated system But they have been abandoned by almost every one of the shining lights of the new gospel of Listerism. A reaction has set against their use, and those who continue to prescribe them say they are not indispensable.

The Vienna Lying-in Hospital has long since discarded them, and according to its statistics with decreased death-rate. The same is true of the lying-in hospital at Prague.

Fritsch, of the Woman's Hospital at Breslau, strongly condemns the vaginal douché after normal labor. He says: "The lochia cannot be noxious to the organism from which they naturally and normally flow. He refuses to disturb his patient and to run the not improbable risk of injuring her by frequent use of the syringe, and rests content to leave to nature the fulfillment of a perfectly natural task."

The New York Maternity has discarded their use.

Prof. Tarnier, at the Maternity at Paris, and also in the Pavilion connected therewith, never uses vaginal nor intra-uterine injections after normal labor has been completed.

Prof. Speigelberg followed Tarnier's method. Drs. Maggioli, of Rome, and Graily Hewitt, of London, recommended a like course. In Queen Charlotte's Lying-in Hospital, Dr. Thomas' rule for repeated vaginal injections after normal labor is not observed. The last statistics which I have seen (1885) show that 1,100 women had been delivered in this hospital without one death.

At the Rotunda Hospital, Dublin, Dr. Macan, Master, says he "never allows any prophylactic antiseptic injections, whether vaginal or uterine, not considering it even necessary to use an antiseptic solution for washing the external genitals, which is done twice daily with plain warm water." I could quote great numbers of such experiences, but it cannot be necessary to do so. Why were antiseptic injections abandoned? For one reason particularly—*i. e.*, they are unnecessary.

Having, I hope, shown that the antiseptic system of midwifery in normal labor is unscientific, unsuccessful and unnecessary, I come now to the last division of my subject, and shall attempt to demonstrate that the practice is frequently directly harmful to the lying-in woman.

While Dr. Thomas is more conservative and only uses antiseptic intra-uterine injections when the pulse is quickened, the temperature rises several degrees, and the lochia become offensive, numerous septicæmists insist upon the necessity of antiseptic intra-uterine injections in all cases of normal labor immediately after the expulsion of the placenta. Some of them in high places say "intra-uterine injections are as harmless as the washing of the stump after amputation." They teach their classes that "they are perfectly harmless and a powerful weapon for good." I shall therefore consider the dangers of both intra-uterine and vaginal antiseptic injections together. On account of the

already great length of my paper, I cannot attempt to treat this subject exhaustively, but will do so somewhat briefly.

Dr. Lusk says: "But in these hospitals, and everywhere, the indiscriminate use of uterine injections has invariably added to the mortality."

Dr. T. G. Thomas says: "There are dangers attending the administration of intra-uterine injections. First, the entrance of air into the uterine sinuses; second, the production of hemorrhage; third, the danger of forcing fluid directly into the general circulation through the injection tube introduced into the mouth of one of the uterine sinuses; fourth, convulsions and violent pain which produce a sudden and baneful influence upon the nervous system; fifth, the passage of fluid into the peritoneal cavity through a fallopian tube."

The baneful effects of prophylactic intra-uterine injections have been observed in Germany, and the practice has been abandoned in that country for several years. "Max Rungel showed that an epidemic of puerperal fever had been spread by intra-uterine injections."

At the meeting of the Minnesota State Medical Society, 1884, Drs. Dunsmoor, Hunter and Finch cited cases illustrating the dangers of intra-uterine injections.

Kehrer, of Heidelberg, has seen fever persist during use of antiseptic vaginal injections and cease only with the discontinuance of the injections. He also says he found more or less fever in one-third of all cases of obstetrics during antiseptic vaginal injections with bichloride of mercury; and yet Kehrer is an ardent advocate of antiseptic midwifery.

Dr. Lydston, of Chicago, "has observed the temperature rise and pelvic inflammations follow the use of frequent vaginal injections."

It would seem eminently proper to demand of the advocates of antiseptic midwifery that they use as a disinfectant or antiseptic some substance, which while having microbicide properties it have not a strongly poisonous effect upon the parturient woman. Have they done this? Certainly not. They have generally centered upon one of the most irritating and deadliest poisons in the whole materia medica—*i. e.*, bichloride of mercury. The journals are constantly reporting cases illustrating the toxic effects of this substance when used as vaginal and intra-uterine injections.

At a meeting of the German Gynecological Society, September, 1883, Kehrer reported 4 cases, out of 221 deliveries, in which urticaria appeared upon the thighs, and which spread over the whole body, lasted for 3 or 4 days and disappeared, caused by injections of bichloride of mercury. He witnessed stomatitis as the result of the bichloride injections in 1 parturient and 3 gynecological patients. In the same discussion Kehrer said "the bichloride roughens the skin, and also the vaginal mucosa In view of this fact, the frequency of vaginal injections should be limited as much as possible."

In the same meeting, Pochownick (of Hamburg) said: "Aside from slighter affections, eczemas, etc., the nurses and even the assistants in the Hamburg City Hospital had been seized with dysentery by the use of bichloride dressings in surgical cases."

Hegar (of Freiburg) said "he had observed severe salivation after laparotomy, in which bichloride had been used."

Schatz (of Rostock) had witnessed a case of salivation following vaginal injections of bichloride of mercury.

Badlehner "had observed that bichloride solutions of 1 to 4,000 for vaginal injections produced irritability."

In 1884, Stadfeld, of Copenhagen, another advocate of anti-

septic midwifery, reported a death from poisoning by bichloride of mercury 1 to 1,500 used as a uterine injection.

Dr. Frankel, of Hamburg, Germany (1884), "reported 14 cases of toxic enteritis; two of these cases he thinks were killed by the poison (bichloride irrigations) directly; the remainder died under circumstances which caused him to believe the fatal results were not directly chargeable thereto."

Dr. Peabody, of the New York Hospital, from whom the report of Frankel's is quoted, reports for 18 months 11 cases of obstinate diarrhœa produced by bichloride of mercury used as an antiseptic dressing or application; 7 of these cases were followed by frequent bloody discharges, griping, tenesmus, prostration and death.

Dr. Thorn, of Halle, reported two fatal cases of poisoning by bichloride used in obstetrics

Winter has seen like results.

Hofmier (of Berlin) reports 2 cases of toxic effects of the bichloride, one proving fatal.

Auvard reports two fatal cases of bichloride poisoning from intra-uterine injections.

Bouchard has reported two cases of mercurial poisoning.

At a meeting of the Practitioners' Society of New York, April, 1885, Dr. ——— said he had seen 3 cases of salivation follow the use of vaginal injections of bichloride of mercury.

At the last meeting of the American Gynecological Society, Dr. W. L. Richardson, of Boston, referred to the inconvenience which he had encountered in the use of the bichloride as vaginal injections, 3 cases of salivation being produced thereby, even when used very weak, 1 to 2,500. He expresses himself as unwilling, on account of its toxic effects, to continue the use of the bichloride.

Herff, of Germany, says: "Thirteen cases of severe poisoning, with four deaths, have been recorded in Germany. He also says he "is cognizant of a number of cases in the practice of others where salivation followed on injections of strength of 1 to 2,000. Herff further says where there is atony of the uterus, or where there are wounds of the genital tract, sublimate injections are not to be used at all.

Keller, of Germany, says: "Corrosive sublimate is a reliable disinfectant, although a dangerous one, since it is apt to affect the kidneys disastrously."

But not to detain you with further quotations in reference to the dangers of bichloride of mercury as a dressing to wounded surfaces, and as vaginal injections, I wish only to add that there seems to be a general consensus of opinion in the profession that bichloride is as free from toxic effects as is carbolic acid, and by the vast majority far more efficacious as a disinfectant or antiseptic.

Gentlemen, my task will here be drawn to a close, but there are numerous points untouched, which are of much interest in a comprehensive study of this great question. There is nothing either new or original in this paper; I hope I am not presumptuous enough to think I am able to solve problems which have confused the brightest minds in our profession for decade upon decade. My object has been to collate facts, and so present them that you may easily draw your own conclusions, and to elicit your experience in this disease. In combating the fashionable theories and methods of the present day, I am prompted by a desire to impress you with the fact that much in this field which passes for scientific demonstration is only the work of noisy cartmen, who are, in fact, only at best, gathering undressed stones, which in future may be polished and used in building the temple of scientific medicine. But why combat

them? Because they are doing much harm; they are making parturition a pathological process, when in fact it is only a physiological one; they surround the lying-in woman with so many dangers as to render her condition well-nigh hopeless. They are clogging the wheels of true progress in obstetric practice by cumbering this art with unnecessary paraphernalia, and a retinue of attendants, professional and unprofessional, which are wholly beyond the means of the poor to command.

At the present day, as fifty years ago, we are only on the threshold of the inquiry, and if any real advance is made, it can only be through humbly admitting our want of knowledge and seeking it—not by substituting presumptuous theories for demonstrated facts.

Well, what shall we do? Hold on to the good old way until we have something more palpably proved to shake us from our faith in old methods.

In private practice insist upon thorough cleanliness of doctor, nurse and patient by the good old rule of freely using soap and water; reserve your disinfectants for use when the hands, person or clothing are suspicious of putrefactive contamination; have your patient freely avail herself of the air and sunlight which are the best disinfectants; when labor comes on avoid religiously that frightful evil, meddlesome midwifery; thoroughly empty the uterus and secure firm uterine contractions; remove all soiled clothing from person and bedding from bed; ventilate the room; keep the external genitals washed with warm water several times daily; use carefully the vaginal douche, composed of warm water, once daily; change the napkins every 3 to 6 hours; guard your patient from indiscretions of bodily motion and diet; give ergot for several days to promote uterine contractions, and you have done all that is necessary in

normal labor. If decomposed substances exist in vagina or uterus, wash them out by the douche, as indicated, and if you please, charge the water with some mild antiseptic. This done, all that scientific medicine requires will have been discharged, and the poor and friendless may approach the ordeal of her lying-in bed with confidence that there is safety even for her.

REPORT OF SURGICAL CASES.

MINOR OPERATIONS WITH COCAINE AND OTHER CASES.

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The value of cocaine as a local anæsthetic has become so well known that it seems but repetition to report more cases unless it be to increase the evidence in its favor.

Case 1st.—Mr. D. came to the college clinic on the 2d of December, 1885, with a tumor the size of an egg on the radial side of the left forearm about two inches above the wrist. He wished the tumor removed, but was very nervous about an operation, and did not wish to take an anæsthetic. He was told the operation could be done without putting him to sleep or giving him pain; so he consented and was operated upon before the class. The skin over the tumors was first anointed with oleate cocaine 5 per cent., and when the sensibility had diminished six hypodermic punctures of 8 minims each of a 5 per cent. solution of cocaine were made around the tumor in the line of incision. After ten minutes the operation was begun and completed without the first expression of pain, although it took eight or ten minutes to make the necessary dissection The wound was dressed, and he arose from the table delighted with cocaine and its happy effect.

Case 2d.—Sarah G. presented herself with a tuberculous disease of the 2d joint of the left index finger; amputation was deemed advisable, and she was told of the anæsthetic properties of cocaine, and consented to have it tried. A piece of small rubber tubing was placed around the hand, with a compress over the palmar arches, so as to arrest the circulation and control hemorrhage. The metacarpo-phalangeal joint having been decided upon as the seat of operation, six injections of 8 minims each of a 5 per cent. solution of cocaine were made around the line of incision, and in ten minutes the operation was performed, the woman not feeling the slightest pain—in fact, was surprised when told the finger was off.

Case 3d.—This case, one of long standing, ingrowing toe-nail, was sent to me for operation by my friend, Dr. H. H. Steiner. The patient, a young man of 18 years, had not been able to wear a shoe for three years. An examination of the toe showed the nail, except a very small part of its centre, buried in painful, angry-looking granulations—in short, one of the worst of that class of painful troubles. It was so excessively painful that he was loth to have me do anything for him, but after assuring him that with cocaine it would not be painful, he consented, and the operation performed as follows: The toe was first ligated at its base with a piece of elastic cord, then the entire upper surface of the toe anointed with oleate cocaine 5 per cent. After waiting a few minutes four punctures of 10 minims each of 5 per cent. solution were made, one being along either side of the nail, one at its base over the nail and the other under the nail, none of these punctures giving pain. The scissors were then passed under the nail beyond the matrix and the nail split, either half being removed with the forceps. The granulations were then shaved off all around on

a level with the bed of the nail and the dressings applied. During the entire operation the patient did not wince or show the slightest evidence of feeling pain. The value of the ligature in localizing the cocaine in these operations was very evident, and in none of them was any constitutional effects noted.

AMPUTATION OF THE BREAST—DEATH FROM TETANUS ON THE TENTH DAY.

In May, 1884, I was requested by Dr. E. C. Goodrich to see, with a view to operating, Caroline McC., a mulatto woman, weighing something over two hundred pounds. She had a scirrhus tumor of the right breast. The woman's breasts were very large, and the right one, occupied as it was by the tumor, was enormous. The operation was performed on the 3d of June, Drs. Goodrich, Doughty and Fargo present and assisting. Two elliptical incisions about nine inches in length were made from the top to the base of the gland, and the tumor carefully and slowly dissected out, all bleeding vessels being clamped and twisted as they were cut, so that the hemorrhage was small, although the operation lasted nearly three-quarters of an hour. The tumor, upon removal, weighed something over three pounds. The axillary glands were not at all implicated, so it was not necessary to go into that space at all. After the oozing had ceased, the wound, which was very large, was sponged out with carbolized water, 1 to 20, dusted with iodoform and closed with interrupted sutures and adhesive plaster. The line of incision was again dusted with iodoform and the wound covered with antiseptic gauze. On the fourth day the dressings were removed and primary union found, except at the center of the wound, where a piece of adhesive plaster had slipped and allowed some gaping. The suppuration, except at this

point, was nil. The woman continued to do well until the sixth day, when tetanus set in, and she died on the tenth day after the operation. Tetanus, after this operation, is rare; hence I thought it of interest to report the case, especially as will be noted no ligatures were used, and the axillary space, with its numerous nerves, was not invaded.

INCONTINENCE OF URINE AND REFLEX CONVULSIONS CAUSED BY CONGENITAL PHIMOSIS—CIRCUMCISION—CURE.

On April 18th, 1885, Willie J., aged about three years, was brought to my office with the following history: He had suffered with incontinence of urine since birth, but otherwise had been in good health until six days before, when he had a violent convulsion, which was repeated the next week. The convulsions continued increasing in number and severity, and when brought to me he was having three or four daily. Examination showed the preputial orifice very much contracted, scarcely admitting a pin-head, with adhesions between the glans and mucous membrane. With the assistance of Dr. J. B. Morgan he was chloroformed and circumcised, the mucous membrane torn from the glans, clipped off and its cut edges laid in opposition with that of the skin. A simple dressing of carbolized glycerine was applied and the little fellow sent home. The week following the operation he had a convulsion, but not severe; three weeks later he had another, but very slight. Since that time now about a year, there has been no return, and he is now in excellent health, cured of both his troubles.

In this connection it may be of interest to report a case of circumcision recently performed for Dr J. E. Green, of this city, on a patient of his, who was over 70 years of age.

THE CURETTE TREATMENT OF A CERTAIN TYPE OF CUTANEOUS ULCERATION.*

By HENRY WILE, M. D., Atlanta, Ga.

Cutaneous ulcerations are never primary lesions, but always follow an acute or chronic inflammation, and are attended with a varying amount of destruction of the corium. They may occur on any part of the body, exhibit as a rule little tendency to undergo reparative changes, and in the event of their healing, a cicatrix always results. These lesions are distinguished according to the nature of the primary process to which they owe their existence. Thus we differentiate between syphilitic, epitheliomatous, tuberculous and varicose ulcerations.

In olden times chronic ulcers were supposed to bear an intimate relation with certain conditions of the blood. The lesions were regarded as a means whereby poisonous materials were eliminated, which, if retained, or driven in by attempts to close up the natural outlet, might take refuge in some internal organ and cause disease, even death. In cases of amenorrhœa, it was supposed that the process was a sort of vicarious menstruation. These ideas, though still met with among laymen and some of the older practitioners, are, thanks to the works of modern investigators, being abandoned.

I wish to consider but one of these forms of cutaneous ulcerations, a form most frequently encountered in general

*Reported from the Section on Surgery for the Fifth Congressional District.

practice, and which as to treatment often taxes the ingenuity of the physician, and sometimes wears out the patience of the afflicted one. The form of cutaneous ulceration to which I allude is the varicose variety, or common leg ulcer, met with in individuals having a varicose condition of the veins.

The varicose ulcer occurs, as a rule, on the lower third of the tibial region, on one or both sides, in most cases on the anterior surface, though sometimes completely encircling the limb. They are most commonly met with in middle aged and elderly persons, both male and female, in whom there is a varicose condition of veins, as in women who have been pregnant, where there has been continued pressure on the return current, or in persons whose occupation requires them to stand upon their feet for hours daily. The first symptoms are itching and burning sensations, accompanied by redness and swelling. The diseased process is primarily a dermatitis caused by the scratches of the patient, by traumatism, minute hemorrhages or eczema. An inflammatory condition is excited, and the skin, being already in a state of passive congestion and tension, undergoes necrobiotic change, and an ulcer is the result. The lesion may be single or multiple, the smaller ones being round or oval, the larger ones irregular in shape. The edges are flattened, or but slightly elevated, and present a degree of callosity in proportion to the duration of the lesion. There is little or no induration around the edges, and the base of the ulcer is flat, secreting usually a scant, thin fluid at times tinged with blood. When existing for years the lesion may become exceedingly painful.

As to diagnosis, varicose ulcer is especially to be differentiated from syphilis, whose lesions often invade this region. The main distinguishing features are the flatness of the surface and border, the scant and thin character of the secretion,

absence of surrounding infiltration, occasional pain, presence of varicose veins and history of the case.

The various modes of treatment of chronic ulcerations, especially the varicose ulcers, are familiar. The principles that underlie the numerous methods are in the main stimulation and pressure. The roller bandage gives that support to the cutaneous vessels, which the tissues of the skin are unable to furnish, and by its pressure lessens materially the passive congestion.

When, however, the ulceration has continued for years, when the edges are of a pale, slightly cyanotic hue, flattened and callous to a degree, with a base uneven, and covered with excessive hypertrophic granulations so as to give a marked papillary appearance, the ordinary methods of treatment are not satisfactory. As is well known, these chronic ulcerations occur, as a rule, during middle or old age. Then again, it is no new fact that a benign chronic inflammation of the cutaneous tissues in an elderly person may assume a malignant character. In fact, most of the cases of cutaneous epithelioma are direct issues of chronic ulcerations. There is no doubt but that these indolent ulcers of the leg, if neglected, may and often do take on epitheliomatous characters and therefore prove so rebellious to the ordinary routine treatment.

Says Dr. Fornad, of Philadelphia: "I have on several occasions contributed to prove that most of the so-called indolent ulcers are epitheliomata; nearly all those everlasting ulcers are surface cancers. . . . . I examined many of them microscopically, and nearly every one proved to be an epithelioma."

The treatment by the curette, though mentioned by authorities, has not, as far as I know, been specially advocated. By means of this instrument the base and edges are thoroughly scraped, removing excessive granulation, together with all

diseased tissue. Thus a chronic process is transformed into an acute one, which receives the treatment of an ordinary traumatism. With the preliminary use of a ten to twenty per cent. solution of cocaine all pain is avoided and the patient witnesses the operation unconcerned.

To illustrate, I offer the following case, which was reported in one of my clinical lectures, published in the October number of *The Atlanta Medical and Surgical Journal*, 1885. At that time I did not use the curette treatment in the case. I quote the description as given in the *Journal*: "On the upper third and anterior cutaneous surface of the tibia is an ulceration nearly palm-sized, irregular in outline, sharply circumscribed, with a surface covered with exuberant granulations. The lesion existed thirteen years." Besides this the borders were flattened and pale. When the patient first presented himself, I used a stimulating, slightly caustic paste in conjunction with the roller bandage. Local treatment was changed from time to time, but the process seemed to remain *in statu quo*. October 22, after applying a twenty per cent. solution of cocaine, I curetted the lesion thoroughly, applied a simple dressing for a few days and subsequently used stimulating ointments of calomel, gradually increasing in strength. November 18, twenty-seven days after the treatment, when I last saw the patient, the ulceration was reduced two-thirds its size, and the epidermis was rapidly closing up the solution of continuity. This case represents a large class that require a more active, energetic method of treatment than is commonly employed, and it has occurred to me that delay in effecting a cure and failure to cure may in many instances be attributed to mild, inefficient methods. The effect of the curette is to remove unhealthy tissue and convert a chronic inflammatory process into an acute one. This can be done with strong cauterizing agents, but these

cannot be so well controlled. Sometimes the application does not remove enough; at other times it may go too far in its action. With the curette it is possible to appreciate the difference between removing healthy and unhealthy tissue, the former offering much more resistance than the latter, so that it is possible to appreciate the limits of the diseased process. I therefore consider the curette as a valuable instrument in the treatment of chronic cutaneous ulcerations, especially those of long standing and associated with varicose veins.

APPLICATION OF PRESSURE BY THE TAMPON TO THE CAVITY OF THE UTERUS FOR DISEASES OF THE ENDOMETRIUM, SUBINVOLUTION AND PROLIFERATION OF CONNECTIVE TISSUE.

By V. H. TALIAFERRO, M. D.,

PROFESSOR OF OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN IN THE ATLANTA MEDICAL COLLEGE, ATLANTA, GEORGIA.

In 1871, and while living at Columbus, Georgia, I published a paper upon "Uterine *Cloth Tents* in Diseases of the Body and Cavity of the Uterus." In that paper the following language is used: "For some years previous to the adoption of the cloth tent I had used strips of cotton cloth or linen, saturated with Churchill's tincture of iodine, solution of carbolic acid, or other substances to be used. One end of the strip, placed over the point of a small probe, was passed to the fundus of the uterus; the probe being withdrawn, was again and again introduced, carrying with it at each time an additional fold of the cloth until the cavity was completely *packed*. This *packing* was permitted to remain until expelled by the contraction of the uterus, which required usually from six to twelve hours. The firmer the packing the more active the contractions and the quicker its expulsion."

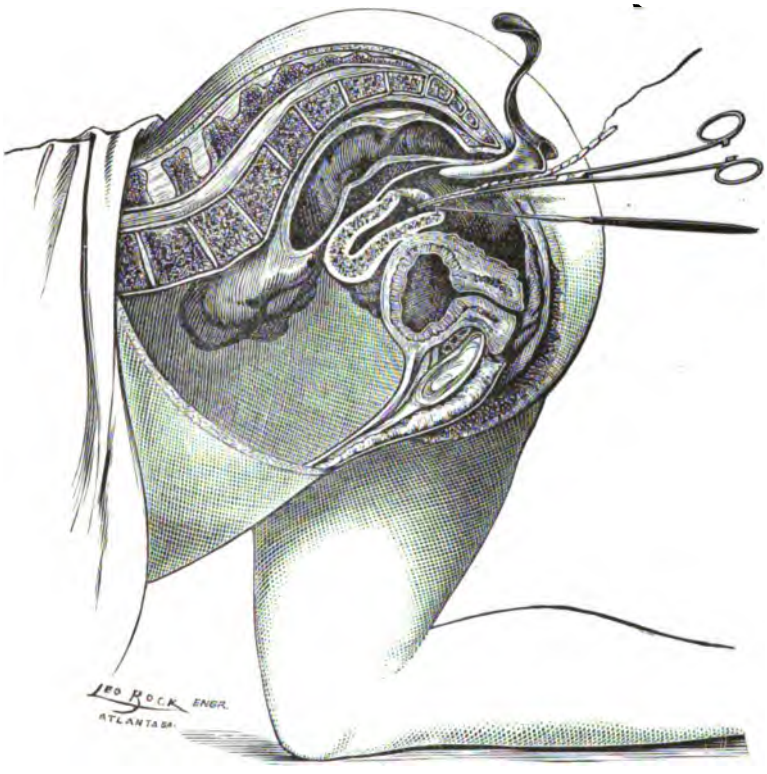
In 1882, in a paper published in the Atlanta *Medical Register*, upon the "Application of Pressure in Diseases of the Uterus, Ovaries, Peri-Uterine Structures," occurs the following: "In very old cases of this kind, where the tissues have

become thoroughly hardened, and the progress of the cure is found to be slow, we often extend the pressure to the uterine cavity, by means of the tent, to the cavity of the uterus, in conjunction with the vaginal tamponade. Upon each renewal of the tampon, an additional tent is used until as many as five or six are introduced at one time. In this way we get thorough dilitation and softening of the uterine structures without confinement to bed and without discomfort to the patient."

In February, 1884, I first used the *cotton tampon* to the uterine cavity for the purpose of *pressure* upon the diseased structures of the uterus in lieu of the cloth tents. I at once saw the great advantage in the more uniform and thorough pressure thus obtained. Since this time a great many cases have been treated. It will be seen that, step by step, I was led to the use of the *intra-uterine tampon* to the cavity of the uterus in the diseases of its mucous membrane, as well as its parynchematous structures.

As a therapeutic measure, the *intra-uterine* tampon is simple, safe and marvelous. Chronic inflammation, granular erosions, mucous fungosities, together with the usual subinvolution, rapidly disappear under the influence of the pressure. With the proper observance of the contra-indications, to all intra-uterine applications, the remedy is perfectly safe. It should, of course, never be used when there is the vestige of inflammation in the peri-uterine structures. I have now a patient at my private infirmary whose uterus has been packed from the fundus to the end of the cervix for more than a month, who rarely goes to bed, except by my instructions, for some hours immediately following the application. So long as there is sufficient oozing of blood to saturate the tampon, it is removed and re-applied daily; otherwise it remains for two days. If iodoform is used with the packing,

as should always be done, the patient is secure against sepsis, the dressing removed being clean and free from odor, though it remain for days. I not unfrequently leave it alone for three days.



The illustrations convey quite a correct idea of the method of applying the tampon. The patient is placed in the knee-chest position, or Sims' semi-prone, and the perineum retracted with a Sims speculum, or with any perineal retractor. I use my own speculum, as it separates the vulva and vaginal orifice better, and gives a more satisfactory command of the parts. The anterior lip of the cervix is seized with a

tenaculum and the uterus lifted forward toward the vaginal outlet. A little pledget or roll of cotton, with a thread wound about it, is now seized with the dressing forceps (with small blades) and carried in the uterus quite to the fundus; this being done, the blades are sufficiently separated to loosen their hold and partially removed, and the cotton roll caught in a new place and carried up, as was the first, the maneuvre being repeated again and again until the little roll is thoroughly packed away in the uterus.* These little cotton rolls are repeated one on another until the entire cavity is filled. Each piece of cotton is wound about (as represented in the

diagram) with strong spool thread with a long end left to better facilitate and insure removal. The size and length of the cotton roll should correspond with size and depth of the cavity to be filled. I have packed as much as one and three-quarter yards of lamp-wick in a single piece in the cavity of the body. The cavity in this case was unusually large and filled with granulations. I tried the lamp-wick because of its convenience, but discarded it on account of its hardness and want of elasticity. Nothing does so well as

*In *the beginning* of the treatment in ordinary endometritis the tampon should not be carried further than just within the internal os—the cavity being gradually and carefully encroached upon until the fundus is reached. When the uterus is filled with fungus granulations the tampon should be carried at once to the fundus. The intra-uterine tampon should always be accompanied by a small but firm vaginal tampon—using glycerine and iodoform on the first pledgets. The patient should be kept in bed for some hours following the treatment, or if there be pain, so long as this continues. If pain is persistent the tampon should be removed.

new clean cotton. The new cotton does not need washing or other preparation. Absorbent cotton does not do so well—it packs too hard and is inelastic. I usually get clean sample cotton from the cotton factors. In this way we can feel sure of using an article that has never been in use.

It will be observed that the intra-uterine packings were in my first experiments expelled by the contractions of the uterus induced by pressure. I have since learned that this occurred then, as it does now, in a certain class of cases, where there is simply mucous inflammation, with more or less sensitiveness. Where there is a large patulous cavity none occurs, nor does it occur in any case if the uterine cavity is slowly and gradually encroached upon and tolerance induced.

SYNOPSIS OF COUNTRY PRACTICE A HALF CENTURY AGO.

By HENRY GAITHER, M. D., Oxford, Ga.

You invite me to write something for the approaching session of the Medical Association of Georgia on any subject I might select.

As you have so many literary delicacies served up annually by our honored and learned brethren, I conclude to vary the entertainment by giving you a running desultory narrative of country experience, touching only a few points in this very wide field.

Well, I am a country doctor and have been *ab initio*; I say country doctor, because most of my practice has been in the country, although I live, and have lived from the start, in a little town, and have shared satisfactorily the practice there with my worthy competing brethren.

I am no surgeon; have no special pretentions in that line, but have had to do some things (in all the departments) that meet the general practitioner, such as broken and dislocated bones, from head to foot. Also accouchments, in number somewhere between 3,000 and 5,000, in a half century, embracing the extremes of from "do nothing" to forceps, and more formidable instrumental cases. I recoiled from surgery, not from fear of blood, but from the belief that no one could become highly proficient therein, outside of a large city, with its facilities and patronage. Moreover, in the country one must accept cases of all kinds as they

occur, or cripple his business, or quit the calling. In those far-back days there were no railroads to take the patient to the city, or the surgeon to the country. Hence the necessity of being well "read up" for any emergency. To illustrate: Mrs. M., a primipara, in the hands of a midwife, had a succession of convulsions and continued profound coma. This was my first case of the kind. No consultation within twelve miles. Relief must be speedy or death ensue. I felt the awful responsibility. Two human lives at stake, and I had never seen instruments used. Prompt action needed. How glad I was, that I knew what the books said on the subject, as well as I knew the A, B, C's. My lancet did its work freely. The forceps, warmed, oiled and applied *secundum artem*, and co-operating with the pains, a large, male child soon delivered, apparently lifeless but soon resuscitated, and then the mother received attention. No abrasion on the child or injury to the mother. She was soon well and the child grew finely.

As to hare-lip, I have operated often, and with success, sooner or later in all cases. The patients from three months to adult age; I give a case: Miss H——, a beautiful girl, in a deep and dark recess of the country, whose penurious father had long refused the operation, fearing the cost. Accidentally seeing her, I tendered my services gratuitously. A successful operation was soon followed by her happy marriage. By the way, the rule of my life has been, when I tender my services (that my motive be not misunderstood), I never accept a fee. To the rich I never tender them.

"Esq." T., a rich farmer and money lender, called me to see his son, a young man who had been bleeding three days from a tooth the blacksmith had extracted. He could hardly turn in bed or have his head raised without fainting. A large clot, from under which the blood flowed, was removed. Pul-

verized alum, a dossil of lint, and a bit of cork to keep it adjusted, cured the "heir apparent" at once. This success, after the failure of "soot and sugar," and the blacksmith, made the father think I could "conjure;" he asked the price of operating for hare-lip on a negro boy; $25.00 was the reply. The benevolent millionaire could not stand that, and the boy, so far as I know, wears his deformity to this day. I was more than willing to serve God's poor, but not willing to reward and cultivate covetousness I wanted to follow, in faith and practice, good old Sydenham (and later Dr J. A Eve), that while the rich pay for themselves, God pays for the poor.

Mrs. H. had for years suffered the horrors of recto-perineum laceration, occasioned by the mismanagement of an ignorant midwife. I pared the edges and closed the awful gaping chasm with interrupted sutures, constipated the bowels, according to the books, for I had no experience in that line, and no older help could be had in that distant place and day. In due time she was well, and after an interruption of years, a new series of children appeared, and continued in regular succession until the menopause. Before leaving this branch of the subject, I should say I have had quite a number of instrumental eases, either of my own or when consulted. More of forceps than of other instruments, yet carrying out practically the teachings of Denman, Baudaloque, Burns and others of that type; I conclude my instrumental cases have been relatively fewer than more modern teachings, and less reliance on the resources of nature would have yielded.

As to fracture of the skull, I have had many cases, mostly of boys thrown from horses or mules. After minor preliminaries and venesection, we attempt to move the bowels, actively, often hard to do, from nausea and vomiting, but per-

sistence in repetition and variety of cathartics, seldom if ever fail, and under rigid antiphlogistic treatment, recovery follows, even when there is continued depression of the bone, especially in boys, and after attaining maturity, I have not known epilepsy to follow. I remember a man of mature age who had deep depression from a fall from his horse. Coma, constant and profound, aided by the gifted Dr. W. P. Graham, my ever lamented friend, the trephine was used, the bone elevated and perfect and permanent recovery followed.

It is said that Baron Wenzel admitted he had destroyed a "hatful of eyes" before he became proficient in his specialty on the eye. This had a chilling effect on the young ambition of most of us country doctors.

While we lingering sojourners hold fondly to the lancet and scarificator, we joyfully accept modern improvements in implements and medicines. Notably the hypodermic syringe and clinical thermometer among the former and quinia and morphia among the latter. My hair would not have whitened so fast, nor my heart ached so much, nor my patients suffered so long, if I could have put a soothing dose out of the reach of a refractory stomach. Now we no longer give bark in substance and infusion of serpentaria to a revolting stomach in paroxysmal fevers, but cure them in a day or two with almost unvarying success, even cases that formerly lingered for weeks with painful uncertainty of issue. Thus, owing much to our enterprising predecessors, we will emulate their example, and try to leave to our successors tangible evidence that we have not lived and labored in vain.

CAUSES AND TREATMENT OF INFANTS' DIARRHŒA.

By LOUIS E. BORCHEIM, M. D., Atlanta, Ga.

The student of vital statistics must recognize the importtance to the practitioner of a thorough knowledge of the etiological factors of diarrhœal affections in infancy, for by such study we find that of the total number of deaths occurring in our large cities from one-quarter to one-third are infants under one year of age, and of this number some forty per cent. in round numbers succumb to diarrhœal affections, and by appreciating fully the causes that produce the disease having such an immense mortality, making infant life so uncertain, bringing pain and sorrow to homes which but a few months earlier were made happy by the arrival of "baby," can we take the necessary steps for the prevention, and, in case this is no longer possible, for the cure of the disease.

This paper will include only such diarrhœas as are of an inflammatory nature, leaving entirely out of question colliquative diarrhœas, and such as have for their cause the assuming upon the part of the bowels of vicarious functions.

Primary acute enteritis is very common from the sixth month to the second year of life—that is, during the dentition period—and many authors have held that diarrhœa at this period was a physiological depletion to lessen the cerebral irritation, which is more or less prevalent during this period. Trousseau, however, has completely disposed of this

theory by proving that while dentition predisposes to diarrhœa, the exciting causes must be sought elsewhere.

All causes predisposing to dyspepsia may produce diarrhœa by placing in the intestinal tract a foreign body, which in its turn sets up a fermentation leading to inflammation, and a child will sooner or later fall victim to the disease if it be subjected to an unsuitable diet, if it be not nourished exclusively upon breast milk for at least the first four or five months of its existence, if it receives poor milk, and especially if it be weaned too soon (Despine and Picot).

The influence of summer heat is recognized by all as a grave an important factor in the production of diarrhœa, although its *modus operandi* is variously interpreted.

According to some, the intense heat possesses a specifically toxic action upon the digestive tract; according to others, it exercises an indirect action in developing disease germs and foul disease-producing gases.

J. Lewis Smith (ap. cit.) claims that atmospheric heat and its depressing influences are their predisposing causes, while the use of indigestible or irritating food is the exciting cause. An interesting report was made by the Medical Commission appointed to investigate the sanitary condition of Boston, Mass., 1875. They held that intense heat and over-crowding to be the indirect cause of diarrhœas, the direct cause being the contamination of the atmosphere from emanations of privy vaults due to the influence of the heat. These observations prove, if nothing else, that *filth* is a not unimportant factor. The term filth should not alone be applied to the more flagrant and apparent violations of the rules of cleanliness, but as well to those less apparent, as for instance impure ice chests, milk cans, etc.

It is well known that milk, when exposed to air, is remarkably prone to putrescence. So liable, indeed, is it to become

putrid that Professor Lister used it as a substitute for Pasteur's solution in his experimental observations on fermentation and putrefaction. "Milk," says he, "is a pabulum for all kinds of organisms; nearly all kinds of bacteria will live in milk; whereas only a small proportion will live in Pasteur's solution" (*Lancet*, London, December 22, 1877, p. 918). We can judge from this how necessary it is to exercise the utmost cleanliness in the care of utensils required for storing and preserving milk intended for infant food to prevent its direct contamination by filth germs.

The most important agent in the production of diarrhœa is improper diet. To enter into a discussion upon this subject would be unnecessary, as any one having the slightest powers of perception can readily observe that the greatest difficulty he has to contend against in the treatment of children's diseases is improper diet. It seems almost impossible to impress the importance of properly feeding children too thoroughly and strongly upon the minds of the people; and in spite of all protests from the best medical authorities, people, and not alone the lower classes by any means, will insist upon feeding their children upon the scores of "infant foods," whose claims are being so strenuously urged by those most disinterested of people, the manufacturers, together with the physicians, who, for the sake of seeing their names in print, feeling flattered at being advertised as authorities, to say nothing of baser motives, are willing to give these foods their endorsement.

Among causes under the head of improper diet may also be mentioned milk derived from the breast of a woman in poor health, or after some violent mental excitement. We have all seen cases of diarrhœa come on suddenly without any apparent cause, when, upon investigation we find the

nurse to have partaken of some indigestible food, producing dyspepsia in both nurse and nurseling.

Lastly, after all other causes can be excluded as having given rise to the disease, we may take into consideration the taking of cold, and finally teething, which may possibly cause disturbance by the child's swallowing a large quantity of saliva, which may cause slight trouble, but we must not, as happens too often, use the word teething with an ominous shake of the head as a pretense to shield our ignorance.

Treatment.—First a few words on the preventive treatment. Such agencies as heat we naturally cannot always control, for it is not within the power of the majority of parents to send their children to the mountains or seashore; hence I will refrain from a discussion of this question, but simply recommend that, whenever practicable, such a course should be pursued.

Filth, of course, is a preventable cause, and cleanliness of person, cooking utensils, ice chests, cans, or bottles in which nourishment is stored, must be strongly insisted upon; when nursing bottles are used there should always be several on hand, and those not in immediate use, as well as the fittings and trimmings, should be kept in pure water containing a small quantity of sodium bicarbonate in solution. Immediately after using, the bottle should be thoroughly washed in warm water, rinsed out and placed in the soda solution. The preventive treatment of diarrhœa dependent upon defective alimentation consists in so changing and arranging the milk used for babies that the casein will not coagulate in large lumps, and thus become more digestible (Jacobi). To arrive at this result varous measures have been employed and advocated. J. Rudisch recommends the following method of preparing milk: To a half pint of water add fifteen drops dilute hydrochloric acid, to which mixture

add a pint of cow's milk and boil for a few minutes. This preparation A. Jacobi recommends for trial, giving it some endorsement. My own experience is not in favor of it, although theoretically it seems useful.

The water prepared by boiling ordinary commercial barley until it has a mucilagenous consistence which is strained through muslin, and, after addition of a small quantity of salt added in equal proportion to milk, has always answered my purpose admirably, and I can recommend its adoption from an extensive personal experience, both in hospital and private practice. It not only serves as a valuable diluent to milk, but is in itself more or less nutritious; in fact, it is my custom in cases which, as frequently happens, the stomach seems to refuse milk in any form, however prepared or diluted, to adopt the barley water diet to the exclusion of all else, and after having followed it for a few days a tolerance for milk seems to be re-established and I gradually resume its use. I shall not discuss the numerous other substitutes for human milk, but refer to the systematic text-books on children's diseases, and especially to A. Jacobi's elaborate contribution to Gerhardt's Hand Buch der kinder krankheiten Tübingen, 1881.

The medicinal treatment of diarrhœas must resolve itself into the general principles governing all treatment, and I will not occupy valuable space by reviewing and compiling treatment or suggesting formulæ, sufficient will be to point out certain unmistakeable indications which are met with and which require remedies. They are in order as follows:

First. To place the patient in the best possible hygienic surroundings.

Second. To prepare suitable diet, the means for which have been pointed out.

Third. To remove indigestible substances from the digestive tract. This had best be done by small frequently repeated doses of calomel, which not only acts as a laxative, but checks fermentation.

Fourth. Nothing should be given containing any irritating substance; for instance, beef tea, which contains in a concentrated form all the salts of the meat and a comparatively small amount of the nutritive elements.

Fifth. It is necessary to check hypersecretion. This can be accomplished by a number of drugs, vegetable and mineral, e. g. nitrate silver, actate lead, bismuth, chalk, tannin, rhatary, kino, etc.

Finally, something to allay nervous irritability, a plus state of nerve exaltation being always present. This can be done by bromide of potassium or opium. In case stimulation is required camphor, ether, musk or brandy can be resorted to.

NECROLOGY.

REPORT ON NECROLOGY.

To the President and Members of the Medical Association of Georgia:

It is the painful duty of your Committee on Necrology to come before you with the sad intelligence that, since our last convocation, death has been busy in our ranks. His relentless scythe has cut down alike the aged and the young. The nestors, the old veterans, who have fought the good fights, and borne the heat and the burden of the day, and whose brows have been richly wreathed with garlands of professional honors; the young, energetic and ambitious, just entering upon a bright career of usefulness, and full of laudable aspirations, have alike been numbered among his victims. Proper tributes to the memory of each one is herewith submitted, and which leaves nothing specifically to be said by your committee as to each individual. We therefore offer the following general resolutions, expressive of our feelings, for adoption by the Association:

Resolved, That this Association hears with profound sorrow and deep regret of the death of Dr. Joseph Eve, of Augusta; Dr. B. B. Searcy, of Bolingbroke; Dr. E. Fitzgerald, of Macon; Dr. S. H. Gray, of Barnesville.

Resolved, That in the death of these gentlemen, this Association and the profession at large has been bereft of some of its best and purest members and brightest minds and intellects.

Resolved, That in their lives, both as citizens and physicians, they lived in an atmosphere above the ill qualities which

characterize the average mankind, and tended to elevate and refine the respective circles in which they moved.

Resolved, That as hard students in their chosen profession, their integrity of character and purpose, and their devotion to the great principles of right, they have set us an example worthy of our emulation.

Resolved, That the sympathies of this Association are tendered to the families of these our honored dead, and that a copy of this report, together with a copy of the respective tributes to their memory, be forwarded to them.

Respectfully submitted. K. P. MOORE, *Chairman.*

ALEXANDER MEANS, M. D., D. D., LL.D., F. R. S., F. A. A. S.*

By WILLIAM ABRAM LOVE, M. D., Atlanta, Ga.

Alexander Means was the son of an Irish emigrant from the county of Tyrone, in the north of Ireland, who at the age of twenty-one landed at Charleston, South Carolina, and ultimately fixed his residence at Statesville, Iredell county, North Carolina. As may be inferred from the place from whence came the father of the distinguished subject of this memoir, the peculiar characteristics of the *Scotch-Irish* were leading traits in the characters of both father and son. From this branch of the great Celtic race, America has received some of her ablest men and most devoted patriots. The inflexible devotion to principles, formed from conscientious convictions of duty which has ever characterized them, has left an impress upon the history, not alone of the highlands of Scotland and Ireland, but has made the noblest biographies of English history, and made glorious the record of our own land in every department of social, industrial or scientific life. While this general fact is applicable not to a single locality, but is the history of every State, and almost of every municipality in the United States, the profession of medicine, and especially the sciences of chemistry and natural philosophy here as in Europe, have received from this sturdy race the highest expressions of intellectual capacity and the sterling virtues of the noblest manhood.

* This memoir should have appeared in the Transactions ror 1885, but was not furnished until the present year.—Sec.

Our subject was doubly descended from this representative family of the Caucasian race, and thus preserved in himself the fullest expressions of a people who with each century add to their long catalogue of illustrious names. His mother was Sarah McClellan, of that American family of Celts, who are distinguished in arms as well as in the more peaceful pursuits of life. If the old adage, that "*the child is father to the man*," be true, it is equally true that he is the child of a mother.

Greatness, goodness—*yea*, all the attributes of noblest manhood come *in ovo*. Character is there in the germ-cell of existence, and all the future possibilities of the man or the woman, is folded within the mystic labyrinth of this microscopical involution.

Alexander Means was fortunate in being the son of a noble woman, who impressed the genius and moral excellence of her own character upon his mind and nature. The only son and child, it may be readily inferred that maternal fondness would have made the mother more than ordinarily careful in watching the unfolding of a character which had received its impress from the mint of her own nature, but there were other circumstances rendering this solicitude the greater and this motherly love the stronger. In his early youth, Alexander had to fall about him the chilling damps, the dark clouds of poverty. His father, by the over-generous trait of his Irish character, lost all of his small estate in security obligations, and the hearth-stone at Statesville became dreary and cheerless with want, and the gloom of penury put out the bright lights of a cheerful fireside. From this sad revulsion his father never recovered, but found himself and his family subjected to many of the ills which "poverty is heir to" in a world that is too destitute of sympathy for the unfortunate. At the age of ten or eleven years,

he was entered at an "*old field*" school, having been taught at home by his mother to read and write, and also to understand the elementary rules of arithmetic. Some year or two after this his father removed to Wilkesboro, North Carolina, where the son was placed in charge of Mr. Milton Ladd, with whom he continued three years, and received the elemental knowledge of the languages and for the first time an outline of all his preceptor knew of the science of chemistry. Subsequently he entered the flourishing academy of Mr. John Mushat, at Statesville, and enjoyed for a short time the superior facilities then furnished for pursuing a more thorough and systematic course of study. From early boyhood he had acquired a great fondness for reading and was much encouraged in this by his parents, who from their scanty means would contribute now and then to add to the limited library of their student-boy. These his active and eager mind devoured with insatiable avidity. His taste for reading in early life and the facilities afforded for cultivating it, no doubt, contributed very largely to give shape and direction to his agile mind, and laid the foundation for that varied learning which was so wonderful in a man having never enjoyed the advantages of a regular college course.

The first twelve or fifteen years of a boy's life determine not only his moral character, but also, to a large extent, the magnitude and proportions of his intellectual stature. Here at Statesville young Means continued with his excellent preceptor, aiding his willing search for knowledge, until the resources of his anxious father were exhausted and the boy reluctantly forced to leave the school-room, and at a tender age was thrown upon the world as a public instructor, with no pecuniary resource but the meagre compensation given in return for his labor in the school-room, and his own unaided energies to secure the perfection and extension of an educa-

tion but just fairly begun. As to how much he had achieved in the two years with Mr. Mushat, an exponent may be found in the facts of his after history, not alone in his success as instructor, but in the numerous honorary titles and badges of distinction which fell thick and fast upon him in the meridian of life. Before he left the academy of Mr. Mushat, several gentlemen, attracted by the superior evidences of intellectual and moral character which he had given, proposed to his mother to defray all the expenses incident to a collegiate course at the University of South Carolina, then under the auspices of the gifted Dr. Cooper.

Maternal affection, however, could not brook so long a separation from an only child, while her proud Scotch spirit rebelled at the thought of being brought under such obligations as would be implied in acceding to this generous proposal.

At Mocksville, North Carolina, Alexander Means first made his *debut* as a public instructor, and at the age of seventeen began the struggle of life and a career of usefulness rarely equalled if ever excelled in the history of man. To the laborious duties of the school-room he devoted himself for two years with such assiduity that his nervous system became so much impaired as to require a rest and change of occupation. At the earnest solicitation of his fond mother he gave up the school-room and accepted a clerkship with Mr. Finley, at Wilkesboro, much to the benefit of his health. Shortly after assuming this (to him) novel position an event occurred which changed the course of the young commercial novitiate, and gave a direction to the current of his life which made of him a valuable addition to the increasing population of Georgia and gave to the profession of medicine one of its brightest ornaments. This was the death of his devoted mother, to whom he was lovingly attached and for

whose comfort he had been laboring with a zeal as commendable as it was earnest. Those of his many friends who recall the affectionate nature and easily aroused sympathies of our departed brother will readily comprehend how the rude disruption of the strong ties of maternal and filial loves would envelope his whole nature in deepest gloom. From an autobiographical sketch, prepared by him for the private information of his worthy son, Dr. Thos. A. Means, of Montgomery, Ala., and to which I am indebted for many of the facts of this memoir, the most beautiful and tender tributes might be extracted to evidence the high appreciation of the son for so excellent and devoted a mother. How could it be otherwise?

The mercantile business in which he was engaged being distasteful, and there being no inducements of a social character to remain, young Means determined to leave his native State and try his fortunes in Georgia, at that time the most attractive region to young men of industrious habits. With no capital but his excellent character and a fair elemental education, he found his way with difficulty to Madison, in Morgan county, where there were residing among her thrifty citizens gentlemen who had known of him in his native place. Through these influences he secured a school in Greene county, where he taught for two or three years, accumulating a sum sufficient to enable him to select and prosecute the study of a profession. After mature reflection he selected the profession of medicine, while his friend, Eugenius Nesbit, afterwards so distinguished as a jurist in Georgia, selected the law. All who know, as well as we do, the passion of Dr. Means for nature in the several kingdoms, will naturally conclude that his choice of professions was a spontaneous development.

Anatomy, with its wonderful mechanism; physiology, with

its still more wonderful play of vital functions; therapeutics, with its philosophical adjustment of remedial agents to the ever-shifting phases of disease, and the cognate science of chemistry, with its beautiful laws of affinity and combination, presented to his mind a most appropriate and fascinating field for the display of its activities. After thorough preparatory reading under Doctors Randolph and Walker, at Madison, Ga., he spent one session in the medical department of "*Transylvania University*," Kentucky, in the palmiest days of the prosperity of this time-honored institution. Owing, however, to inadequate means he enjoyed the benefit of a single course only. This he improved to the best advantage by thoroughly elaborating and writing out "*in extenso*" every night the lecture which he had heard in the day. His labors were not usually completed until one o'clock in the morning, as he records in an interesting diary kept while engaged in his studies at the university. This severe process, by which he reduced to an actual possession the reading and the experience of the able faculty, upon those particular subjects, sent him forth upon the active duties of his profession better equipped, no doubt, than thousands who have been favored with the advantages of a double course. A mind that holds itself down with unwearied effort to these processes of analysis, acting under the glow of a high furnace heat, will derive more vigor and more available knowledge from these months of application than from many years of careless, superficial study. Returning to Madison from Transylvania University by the only route then open between the Atlantic States and the West, a long and dreary ride on horseback across the Cumberland mountains and through the wilds of a section inhabited by Indians, a license was granted to him to practice medicine. He commenced his career as a physician in Putnam county, at a

place now known as Hearnville, and was soon actively engaged in the varied duties of this responsible avocation. He remained here for two years, and then joined Dr. Henry Gaither at the new and thriving town of Covington, with whom for several years he practiced medicine as a co-partner. Dr. Means had been in the practice of medicine but a few years, and yet long enough to win laurels in his profession, when he was called, in 1834, to another field of labor and to the close study of the different though kindred class of subjects. The Methodist church, to which he had become attached and in which he for several years had led an exemplary Christian life, invited him to the superintendency of a "Manual Labor School," located in the immediate vicinity of Covington, and whose location at that point was due mainly to his earnest and active advocacy. A few years previous to his assumption of this high trust (1828), Dr. Means, under conscientious convictions of duty, became a licensed "*exhorter*" in the church of his adoption, and had begun to evidence that remarkable fluency of speech and charming diction which in after years rendered his public speaking so captivating alike in the lecture-room as in the pulpit or on the rostrum. It was at this time that Dr. Means began the close and critical study of chemistry, and selected it among the cognate sciences of his profession as a specialty to which he would devote the powers of his active and accurate mind. The experiments then being made, in an elemental form, with the forces of nature, and especially electricity, attracted his attention, and to these he gave many hours of closest study.

At this early day so attractive were his lectures, and so novel in this country his experiments, that when Emory College was organized in 1838, he was selected by the "Board of Trust" as its first Professor of "*Natural Sciences.*" The

published essays of the young professor, and his lectures at this new institution, attracted such general attention in the State that the Medical College of Georgia, at Augusta, in 1840, conferred upon him the honorary degree of doctor of medicine, "*as a testimonial of confidence in his proficiency in the sciences and of his skill in the practice of medicine.*" Thus at this late day, after the lapse of twelve years since he had left the lecture-rooms of Transylvania University, does he receive the degree of doctor of medicine from an honorable source and as an unsolicited expression of regard for his attainments. At the same meeting of the Board of Trust, which had so properly honored the "*Doctor*," he was by them unanimously elected Professor of Chemistry in the Augusta Medical College. With a remarkable fealty to the religious denomination, who had in charge the interests of Emory College, he consented to continue his connection with that institution, whose embarrassed financial condition rendered adequate compensation impossible, and thus was conducting the two Professorships, of Chemistry in Augusta and Natural Sciences at Emory. This necessitated the greatest labor on his part, and taxed his strength to an extent which would have destroyed the health of one less fortunate in possessing the very best of physical constitutions. As a lecturer on the science of chemistry at a center of commerce and intelligence, such as Augusta was from 1840 to 1858, Doctor Means was not only popular with medical students and the resident faculty and physicians, but soon secured a reputation which extended into all the avenues of American scientific research. There are many living members of the medical profession, and some present in this meeting of our Society, who recall the rich drapery of language in which he would upon occasions clothe the driest theme of the lecture-room; who remember his brilliant manipulations (especially

in his special branch of electrical phenomena) and the many apt illustrations and the extended range of information which he would bring to bear in unfolding a science abstruse to some and to many uninviting. It was at this time and at this college that the Doctor began to investigate, in special studies and by many experiments, the character of the vital forces of the animal economy, and to make a series of notes upon "*Electricity as a Therapeutic Agent.*" These notes were subsequently formulated into lectures and delivered to the classes of the Atlanta Medical College, in which institution he had then been elected Professor of Chemistry. The constant labor and great zeal manifested by the conscientious professor and enthusiastic devotee of science began to make inroads upon his hitherto robust constitution. As a relaxation and to him most grateful recreation, he visited Europe in the year 1851, and spent several months traveling in England, Scotland and on the continent. He found at London congenial spirits in Sir Michael Faraday, Sir Charles Lyell, Mr. Owen and Doctor Carpenter. These eminent scientists were then in the zenith of their well-earned fame, and soon became, not only acquainted with our American chemist, but in their exchanges of courtesies and correspondence (upon the return of the Doctor to America) evidenced their appreciation of his merit and graces of character. It was upon the introduction of Michael Faraday that Doctor Means was presented to the "Royal Academy of Science" of London, and made a corresponding member of the same. With his health restored and his mind richly laden with treasures garnered in the laboratories and ancient colleges of science in London, Paris and Berlin, Doctor Means returned home and entered with renewed enthusiasm upon the duties of his professorships. Many of his students will remember how eloquently he discoursed to them

upon the incidents and associations of this visit to the classic halls and historic places of Europe, and with what glowing imagery he depicted the scenery of the Scotch highlands and the glories and wonders of the Alps. It was at this time (1851) that he was, upon the motion of Prof. Draper, made a member of the "American Scientific Association."

In the year 1855, Dr. Means resigned the Presidency of Emory College and accepted the Professorship of Chemistry in the Atlanta Medical College, then popular as a "summer school" of medicine. For three years he held the dual professorships at Augusta and Atlanta, the sessions of each terminating and commencing at such seasons as to make his services at both practicable. In 1858 he resigned the professorship at Augusta, where for nineteen consecutive sessions he had sustained the most satisfactory and agreeable relations to the faculty, the students and trustees, and concentrated his labors and matured mind in the service of the Atlanta Medical College.

Here, until the institution was suspended by the civil war of 1861, the Doctor continued to toil, and here did the ripened fruit of his laborious research and patient toil feed the minds of hundreds, whose remembrance of the venerable scientist and Christian philosopher are among the grateful recollections of that period. During his connection with the Atlanta Medical College, Doctor Means, *first* of all explorers in the realm of science, announced many of the phenomena and the properties of electricity, which are now recognized, not only as features and as facts of a science, but as established principles. His declaration that "*electricity was the vicegerent of God on earth*" was but the introduction to more specific evolutions of the character and of the properties of this wondrous force. His lectures on "*Electro-Physiology*" attracted much attention here, and had they been given to the

world in London or Paris, or even in our republican New York or Boston, under the auspices of Cambridge, Princeton, Oxford or Yale, would have secured the just recognition of the scientific character and genius of our none the less worthy Georgian. It was while pursuing these investigations that Dr. Means invented an ingenious instrument for the polarization of electricity, and which has been manufactured by Chamberlain, the great scientific instrument-maker of Boston. Not alone in the originality of his conceptions and the rich diction of a fervid eloquence, which made his power of expression almost marvelous, did he excel, but as an artist, with the brush, the pencil, knife or crayon, he was remarkably expert. His many notes and lectures abound in the most beautifully drawn illustrations of a proposition or theorem in science, so accurate and finely executed as to amount in themselves to a satisfactory demonstration. It is much to be regretted that the lectures of Doctor Means, delivered at this particular time, have not been more elaborately published, especially those upon the properties of *Electricity*, *Electro-Physiology* and *Electro-Therapeutics* Several applications were made to him by the editor of the Atlanta *Medical Journal* for the manuscripts, looking to the preservation of scientific announcements known to have been original with the Doctor and to have preceded those made as *discoveries* by others in Europe and in the United States, who were less modest than our gentle and diffident friend. It may not be too late to present these as *posthumous* works, which will be read in their full force of demonstration by the bright electric lights that presage an epoch in which "*the vicegerent of God*" will indeed be the moving and controlling force of all matter, whether in a normal or in an abnormal state.

When Georgia called her sons together in convention to deliberate upon the course she should pursue in meeting the issues precipitated by the secession of South Carolina from the Federal Union, Doctor Means, with Parmedus Reynolds, was unanimously chosen to represent the county of Newton in that body. With Alexander H. Stephens, Herschel V. Johnson and others he opposed the secession of the State, and spoke in his usually fervid manner against the measure, which he characterized as "*precipitous, unwise and impolitic.*" On the third ballot, seeing a majority differed with him, and through the influence of his life-long friend, Judge Nesbit, he yielded, and against his judgment signed the ordinance. The years of the war closed our colleges, and he removed his private apparatus to his residence in Oxford, where these long, weary days of suspense were spent by him in the retired seclusion of his charming home. The war over, the Doctor resumed his chair in the Atlanta Medical College, which he held until the year 1869, when he resigned to accept the position of "State Chemist." He held this office for several years, having his laboratory in the city of Savannah during the winter months and at his home in the summer. In 1876 Doctor Means was elected a member of the "American Chemical Society, of New York City," in whose deliberations he continued to take a deep interest to the close of his life, and in 1878 was made "Fellow of the American Association for the Advancement of Science."

We have thus, as briefly as we deemed it proper, sketched the prominent features of a character and the events of a life most intimately associated with the scientific and medical history of Georgia for the greater part of this century. We have said but little of other relations which Doctor Means sustained to his country, his friends and to his God in a public or in a private capacity. This we have left to

his biographer, and have contented ourselves in presenting him to our Medical Society as an eminent scientist, a skillful and conscientious physician, that we may in this Society unite with the church he honored, and the other associations he graced by his membership, in paying a just and fitting tribute to his memory.

Having respect to unity of subject, we have omitted to state some facts in their chronological order, which can be mentioned now, to illustrate the regard in which he was held by the scientific and literary institutions of America.

Very few men in this country have been the subjects of so many compliments in the way of honorary distinction as Dr. Means. In 1832 the degree of "A M." was conferred upon him by the University of Middletown, Conn. As already stated, the degree of "M. D." was conferred, in 1840, by the Medical College, of Augusta, Ga., and in 1851 he was elected a member of the "*American* Scientific Association." In 1854 he received the degree of "*D. D.*" from Emory College, Georgia, and in 1858 was honored with the degree of *LL. D.* by the same institution, and retained as "*Emeritus Professor*" of Natural Sciences, besides the fellowship in the "American Association for the Advancement of Science," and membership of the "*American Chemical Society, of New York city.*" He was made, in 1879, member of the "Meteorological Society of Boston."

These facts, taken in connection with his early life, furnish almost an anomaly in the history of literary and scientific men. Nothing short of the most liberal endowment of intellect and the most indomitable energy could have commanded these numerous badges of distinguished merit from such respectable sources—and that, too, in despite of such embarrassments in early life. The only superior advantage which he ever enjoyed as a general student, outside of his

own intellectual resource, was afforded by the visit to Europe in 1851 to which we have referred.

We have now brought up to its close the leading events in this useful and eventful life—a life which has made an impress upon the history of our State, and in its influences has affected for good the destinies of thousands. The records of his voluminous and well-kept diaries show that during the period when he was laboring as a public instructor, from the early age of seventeen until he had passed the score and ten of man's allotted period of life, over *eight thousand five hundred* students, first and last, had been under his care, while the many thousands more, in the United States and in England, who have heard and been impressed with his eloquent discourses from the sacred desk or the rostrum, will only be known in the eternity to which he has gone. No one could have been more generous in his material aid, or more lavish in his expressions of delicate sympathies for the distressed, impoverished youth, struggling against adversity to obtain knowledge. There are many of these who found in him more than a friend, and who owe to his generous bounty and encouragement whatever of position or good fortune they have secured in life. The death of such a man, the close of such a life by a suspension of the vital forces, is by no means its end. Alexander Means to-day is living, not alone with the hosts in a paradise of perpetual peace, but in the hearts of those who admire virtue and honor the character of the true, the good and the great man.

For several months prior to his death his health was seriously impaired, and he became very feeble in body, and the more susceptible to any impressions from exposure. Contracting a catarrh in making a visit to an adjoining county, he had as a sequence a severe attack of acute bronchitis, which, after weeks of great suffering, brought to an end his

life on the 6th of June, 1883, in his *eighty-fourth* year. Full of years and of honors, beloved by thousands, at a home which he had embellished and made charming, he departed to the celestial courts to be honored by his God, and to meet the many who were ready to welcome him to the upper courts of perpetual rest.

DR. SAMUEL H. GRAY.

By K. P. MOORE, M. D., Macon, Ga.

When I set me down to write a memorial tribute to the memory of a true and tried personal friend—one in whom I could always confide with that sort of implicit confidence which in itself is sublime—one in whom I always found *that* congeniality of soul and spirit which almost unites two destinies—one whose purity of character and inner life was so far above the average of mankind, I am forced to the conviction that there is truth in the old adage that death loves a shining mark.

When the unwelcomed visitor entered our ranks and cut off from our roll of membership Dr. S. H. Gray, a truly good and noble man went home to glory. I could not better express his true character than to say that he was the highest type of a Christian gentleman. He possessed in a high degree all the noble qualities of a brave and fearless manhood, and yet he was as modest and retiring as a delicate woman. Never did genuine Southern civility and unbounded courtesy shine out more richly in any man's life than in that of Dr. Gray. Whether among his professional brethren or in the social circle, he was the very embodiment of urbanity and genuine courtesy. His purpose in life seems to have been to live in an atmosphere of purity rather above that which unfortunately seems the heritage of the average mankind. Possessing a natural talent and fondness for his profession, and being a hard student, as well as a close observer, he soon became a splendid physician. His success in building up and

maintaining a large practice among the best people of Middle Georgia was a sufficient guarantee of his real merit. His people and patrons were attached to him with unbounded and unlimited confidence and devotion, and in turn no man was ever more devotedly married to his profession and his patrons. Indeed, he was literally a martyr to his profession, and, like a true soldier, he died at his post.

Worn out with long nursing of a sick family, he undertook to keep up his work, and to relieve the sufferings of others, he fell, on the 31st of August, 1885, a real sacrifice upon the altars of suffering humanity. He was born January 10th, 1846, near Bolingbroke, in Monroe county, Georgia. His parents belonged to the old stock of high-toned, courteous Southern citizenship, and the life and character of Dr. Gray illustrated the Christian training and wise counsels of his devoted parents.

At the tender age of eleven years he was converted to the Christian faith, and united with the Methodist Church, and from that time to the end of life's journey he was a useful member and a shining light in the church and died in the full triumphs of a living faith.

He attended his first course of medical lectures in the Atlanta Medical College, and graduated from the Medical Department of the University of Georgia, in the city of Augusta, in 1867. He taught school for two years after graduation, and began the practice in his native county in 1869. Two years previous to his death he removed to Barnesville, andat once entered upon a very large and extensive practice.

In 1872, he was married to one of his former pupils, Miss Lula Hollis, a true and noble woman, who was a devoted and happy wife, and did well her part to smooth the rugged path of life's fitful meanderings, and upheld and supported her husband under all difficulties. Though feeble herself,

and with a babe only a few weeks old, yet she was faithful and untiring in her ministrations to the end.

In the death of Dr. Gray, the writer has lost a true and tried friend, for as a friend he was as true as steel. Together we felt our first pulses and looked at our first tongues when we were students of medicine in 1865–6. Together we frequently met in consultation after we had both borne the weight and cares of many years of professional life, and some of my greenest spots along life's experience have been with him. I knew him well, and can say of a truth that the profession has lost one of its most useful and brightest members. He became a member of this Association in 1871, and though he did not attend its meetings regularly, yet he was always an active member, and watched its progress and proceedings with unabated interest, and was always one of its warmest friends and supporters. Let us emulate his many virtues. Peace to his ashes.

DR. JOSEPH A. EVE.

By ROBERT BATTEY, M. D., Rome, Ga.

Dr. Joseph Adams Eve, son of Joseph Eve and Hannah Singleterry, was born near Charleston, S. C., the first of August, 1805. Removed at the age of six years with his family to the neighborhood of Augusta, where in the elementary schools of his time he received his education, and by his zeal and industry acquired a fair knowledge of Latin and Greek. Having a natural taste for medicine, he entered upon its study in the office of Dr. Milton Anthony. In 1827 he visited Europe and attended his first course of medical lectures in Liverpool. In the following year he completed his medical course and graduated at the Medical College of South Carolina.

In conjunction with his preceptor, Dr. Milton Anthony, he established in Augusta the Academy of Medicine, which was situated on the site of the present Widows' Home. This was a hospital for patients as well as an academy for the instruction of medical students. In 1832, when the Medical College of Georgia was organized in Augusta, he became associated with his cousin, Dr. Paul F. Eve, Dr Louis A. Dugas, Dr. L. D. Ford and Dr. Milton Anthony, as one of the founders of that institution. He was assigned to the chair of materia medica. In 1839 he was elected Professor of Obstetrics and Diseases of Women and Children, and continued a medical teacher in the college through an uninterrupted period of fifty-three years. He was probably the oldest active teacher of obstetrics in the world.

At one time he was editor of the *Southern Medical and Surgical Journal*, published at Augusta. He was a member of the American Medical Association, of the Augusta Medical Society, an honorary member of the Boston Gynecological Society, and also of the Abingdon (Va.) Academy of Medicine. He was one of the founders of the Medical Association of Georgia, and was unanimously elected its President in 1879. The American Gynecological Society elected him to its first honorary fellowship. In 1882, in recognition of his distinguished career, he was made LL. D. by Emory College, of Georgia. His practice continued active to the close of his life, preferring, as he often expressed it, "to wear out rather than rust out," and he cheerfully continued his visits, even at night, to the suffering up to the last.

He never held civil office but once in his life, when he became a member of the city council of Augusta. For sixty years he was a valued member of St. John's (Methodist) Church, Augusta, and was a trustee and steward of his church to the day of his death. On the first of April, 1838, he married Sarah G. Combs, of Jackson county, Ga., who bore him eleven children, seven sons and four daughters, five of whom, with twenty-two grandchildren, now survive him. He had three sons, Dr. Robert C. Eve, Dr Sterling C. Eve and Dr. Joseph E. Eve, all three of whom, together with his devoted wife, preceded him to the tomb. He was an occasional contributor to the medical journals in practical and instructive medical papers. He died in Augusta, January 6, 1886.

In person Dr. Eve belonged to the class of larger men; tall and well proportioned, with massive head and ample brow, he commanded attention upon the street. He possessed in an eminent degree that better form of manly dig-

nity which rules the world, binding men to him by the silken cords of love and not by iron bands of fear.

In his daily walk amongst his fellows he moved in a personal atmosphere of love and courtesy peculiarly his own. In the family circle there could be no lovelier character. Tender, affectionate and indulgent to all, from the devoted wife through the large circle of children and grandchildren down to the humble servant around the family board, he was the idol of the household, and the stranger within his gates was made to feel himself a kinsman and a brother.

In his professional relations Dr. Eve was remarkable, in that his sense of duty did not allow him to indulge in the relaxation fitting to his advanced age He kept up diligently with the literature of the times and had in hand the new remedies and instruments of younger men. He never allowed his professional heart to grow cold. His interest in his patients and his devotion to their service, and especially to the poor, he leaves behind him for the imitation of the younger and stronger of his brethren. His fatherly care and generous assistance so bountifully bestowed upon the fledglings of the medical flock has filled the South in every quarter with his grateful debtors.

Dr. Eve was an humble and devoted Christian who daily walked with God. He was devoted, laborious and liberal in his active service of the church up to the day of his death.

My brethren, a man truly good and truly great has gone from our ranks to his everlasting reward. He has left behind him an example worthy of our highest emulation. Let us see to it that his memory and his influence shall not be lost to the world.

DR. DANIEL B. SEARCY.

By K. P. MOORE, M. D., Macon, Ga.

Dr. Daniel B. Searcy was born March 17th, 1809, in Baldwin county, Georgia. His father, the Hon. William Searcy, was a successful planter in that county for many years, and several times represented it in the State Legislature. In after life he removed to Talbot county, where he died a few years ago, aged ninety-six years, beloved by all who knew him. Dr. Searcy, the subject of this sketch, was finely educated, and began life well prepared for its duties and responsibilities.

He read medicine under his brother-in-law, Dr. John B. Gorman, at that time a noted physician and druggist in Milledgeville. His reading extended through several years while he assisted in the drug business. He was, therefore, thoroughly prepared, theoretically and practically, to receive the fullest benefit from his medical lectures. He took the regular course at Jefferson Medical College, where he graduated with distinction about 1830.

He practiced medicine in Putnam county a short time, then removed to a point on the Mississippi river a few miles above Vicksburg, where he remained a year. Returning to Georgia, he settled in Monroe county, and resided there to the day of his death.

Dr. Searcy was a constant subscriber to the leading medical journals, which he read with great care, even down to his last days. He was fully posted upon all the advancements in medical science, and kept pace with them in his own

practice. As a physician, he was kind and attentive, and, therefore, had not only the respect of his people, but their love and affection. His practice was very extensive, and covered all the territory he was willing to undertake to practice in.

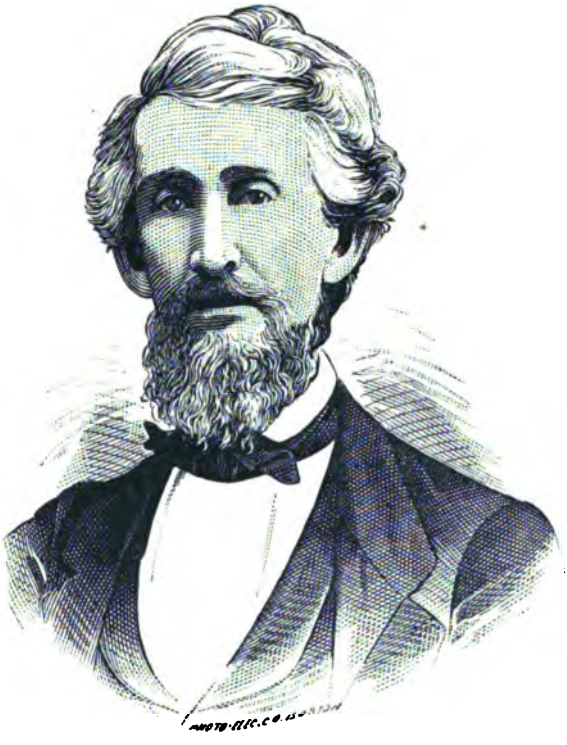
When the Montpelier Female Institute was established at Montpelier Springs by the late Bishop Elliott, Dr. Searcy was selected as the physician. The great Bishop became warmly attached to him, and when the institution was discontinued bestowed upon him many tokens of his affection.

Dr Searcy was one of the original members and assisted in the organization of the Medical Association of Georgia in Macon in 1849. He continued an active member to the time of his death. Although he did not attend the meetings for the last several years of his life, yet he always paid his dues, received and read the transactions with unabated interest, and watched with tender and anxious solicitude the progress and doings of the Association.

Dr. Searcy was a member of the Methodist Church for fifty-three years, and was a noted temperance man and Mason. Indeed, he was always ready to aid in every good word and work.

But, alas! this unique character, in its matchless beauty and perfection, has come to its end, and our friend and brother has passed away. About the first of April, 1885, he discovered that he had heart disease, which quickly brought him upon a bed of languishing. For four months he suffered greatly, growing weaker and weaker, until on the first day of August he passed calmly away in the full triumph of his Christian faith.

His county paper, at the close of a fitting tribute, thus spoke of his burial: "Rev. George Pattillo, assisted by the Rev. Mr. Leak, officiated at the funeral services Sabbath



DANIEL B. SEARCY, M. D.

vening, after which the venerated and belove
distinguished fellow-citizen, followed by a great concourse of friends, was conveyed to the family burial ground, and there sadly and solemnly laid away in the silent earth. At peace with God and at peace with his fellow-men, his body sleeps sweetly amidst the hills he loved so well, while his noble soul, clothed in robes of purity and wearing the crown of life, goes forth a ministering spirit in the realm of endless light."

Shortly after the Doctor's death his beloved wife and daughter, who had attentively administered to him, overcome by disease, heightened by their sad bereavement, followed him to the spiritland.

To the bereaved ones who survive these sad afflictions, we extend our heart-felt sympathy and love.

DR. EDMUND FITZGERALD.

By K. P. MOORE, M. D., Macon, Ga.

The subject of this notice was born August 24, 1824, in Bibb county, Ga. He commenced the study of medicine about two years after reaching his majority, and graduated from the Jefferson Medical College in 1848. The first six years of his professional life were spent in Houston county, Ga., from whence he moved to the city of Macon in 1854. From this time to the time of his death he enjoyed the full confidence and respect of the community, and did a large and extensive practice among the best people of Macon. He was twice married, first in 1859 to Miss L. A. Weed, who died in 1865; then in 1873 to Mrs. E. T. Cochran, daughter of Dr. Tucker, of Laurens county, Ga., who still survives him. He was for a short while in the Confederate service during the war and filled his place nobly.

He was an active and esteemed member of the Macon Medical Society, and enjoyed the full confidence and esteem of his *confreres*. His conceptions of honest dealing and fraternal relationship among his professional brethren were of a high order, and he could always be trusted with scrupulous confidence in the sick-room of a professional brother.

He was a man of strong convictions, and when he made up upon any question had the nerve to maintain his opinion. Though a man of an impetuous temperament and strong will-power, he possessed a big and generous heart and numbered his fast friends by the score. No man ever had

more ardent friends and admirers than Dr. Fitzgerald, and no man would do more for his friends than he. His death was almost a calamity to the city of Macon, and very keenly has his loss been felt by her citizens. He became a member of the Medical Association of Georgia in 1882, and, though not a constant attendant upon its sessions, was a constant reader of its transactions and felt an interest in its progress and success. In the death of Dr. Fitzgerald the profession has lost one of its best members and the State has lost one of her best citizens.

ROLL OF MEMBERS.

ROLL OF MEMBERS

OF THE

MEDICAL ASSOCIATION OF GEORGIA,

1886.

ARRANGED BY CONGRESSIONAL DISTRICTS.

ABBREVIATIONS—P., President; V-P., Vice-President; S., Secretary; C-S., Corresponding Secretary; T., Treasurer; O., Orator; C., Censor—indicating the offices the members hold or have held.

☞ *Members are particularly requested to notify the Secretary promptly on making any change in their post-offices.*

☞ *The Secretary will esteem it a favor if any member will write him at once on noticing any inaccuracy or omission in the roll.*

FIRST DISTRICT.

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.
Charlton, T. J. (C.)	Savannah	Chatham	1862
Colding, C. H.	Savannah	Chatham	1882
Duncan, Wm. (T.)	Savannah	Chatham	1868
Elliott, W. H.	Savannah	Chatham	1881
Harris, R. B.	Savannah	Chatham	1885
Houstoun, J. P. S.	Savannah	Chatham	1873
Hummel, George C.	Savannah	Chatham	1884
LeHardy, J. C. (T., V-P. P.)	Savannah	Chatham	1868
Martin, John D.	Savannah	Chatham	1867
Norton, R. G.	Egypt	Effingham	1872

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.
Nunn, R. J. (C., V-P. P.)	Savannah	Chatham	1867
Purse, B. S	Savannah	Chatham	1885
Quarterman, K. A	Walthourville	Chatham	1885
Read, J. B	Savannah	Chatham	1851
Redding, J. H	Waycross	Ware	1882
Sample, C. L	Cannoochee	Emanuel	1875
Sheftall, B. F	Savannah	Chatham	1878
Stone, George H	Savannah	Chatham	1875
Walker, J. L	Waycross	Ware	1884
Waring, J. J	Savannah	Chatham	1853
Weichelsbaum, J. H	Savannah	Chatham	1884

SECOND DISTRICT.

Alfriend, E. W. (V-P.)	Albany	Doughterty	1852
Bruce, W. W	Thomasville	Thomas	1881
Cheatham, W. B	Dawson	Terrell	1885
Culpepper, J. T	Boston	Thomas	1881
Dekle, Thomas S	Thomasville	Thomas	1874
Dostor, B. R. (V-P.)	Blakely	Early	1873
Hillsman, P. L	Albany	Dougherty	1871
Hopkins, T. S	Thomasville	Thomas	1865
McIntosh, T. M. (V-P.)	Thomasville	Thomas	1874
Strother, Wm. A	Albany	Dougherty	1873
Standifer, W. B	Blakely	Early	1886
Talley, H. M	Nashville	Berrien	1875
Taylor, A. P	Thomasville	Thomas	1873
Thompson, P. H	Bluffton	Clay	1886
Twitty, W. W	Camilla	Mitchell	1871
Wethington, R. T	Thomasville	Thomas	1881

THIRD DISTRICT.

Bozeman, E. K	Americus	Sumter	1877
Coleman, J. T	Perry	Houston	1851
Fielder, J. F	Eastman	Dodge	1884

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.
Fort, J. A.	Americus	Sumter	1883
Havis, M. W	Perry	Houston	1854
Hawkins, S. B. (V-P.)	Americus	Sumter	1871
Herrman, J. D	Eastman	Dodge	1884
Hicks, C	Dublin	Laurens	1884
Hightower, R. H	Dublin	Laurens	1884
Ingram, R. O	Montezuma	Macon	1884
Jelks, N. P	Hawkinsville	Pulaski	1882
Johnson, H. V	Dublin	Laurens	1874
Joiner, B. L	Andersonville	Sumter	1882
Jordan, F. M	Hawkinsville	Pulaski	1878
Logan, A. J	Americus	Sumter	1882
Miller, George T.	Byronville	Dooly	1879
Morgan, Y. H	Cochran	Pulaski	1871
O'Daniel, W. A	Laurens Hill	Laurens	1886
Pate, R. H	Snow	Dooly	1879
Ross, B F	Fort Valley	Houston	1884
Richardson, C. H	Montezuma	Macon	1886
Solomon, J. C	Perry	Houston	1884
Smith, A. A	Hawkinsville	Pulaski	1875
Smith, J. B	Perry	Houston	1870
Taylor, A. R	Hawkinsville	Pulaski	1878
Walker, T. F. (V-P.)	Cochran	Pulaski	1859
Walker, T. D	Cochran	Pulaski	1882

FOURTH DISTRICT.

Bardwell, E. L	Talbotton	Talbot	1872
Beasley, James A	West Point	Troup	1884
Bullard, W. L	Columbus	Muscogee	1882
Cole, J. F	Carrollton	Carroll	1884
Fitts, W. W	Carrollton	Carroll	1872
Griggs, A. W. (O., V-P., C.)	West Point	Troup	1866
Griggs, J. W	West Point	Troup	187

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.
Grimes, George J	Columbus.	Muscogee	1872
Leitner, C. B	Columbus.	Muscogee	1852
Mitchell, Thomas S	Hamilton	Harris	1872
Moore, J. T	Whitesburg	Carroll.	1878
Philpot, W. H	Talbotton	Talbot	1857
Slaughter, J. T	Villa Rica	Carroll.	1859
Smith, C. D	Newnan	Coweta	1872
Taylor, J. P	Haralson	Coweta	1859
Wisdom, F. L	Beuna Vista	Marion.	1876

FIFTH DISTRICT.

Alexander, J. F. (P., C., V-P.)	Atlanta	Fulton	1849
Anderson, W. A. J	Atlanta	Fulton	1878
Armstrong, W. S	Atlanta	Fulton	1866
Baird, James B. (S., O.)	Atlanta	Fulton	1872
Bizzell, W. D. (V-P.)	Atlanta	Fulton	1882
Borcheim, L. E	Atlanta	Fulton	1886
Boring, John M. (V-P.)	Atlanta	Fulton	1856
Calhoun, A. W. (V-P., C., P.)	Atlanta	Fulton	1874
Connally, E. L. (C.)	Atlanta	Fulton	1860
Cooper, Hunter P	Atlanta	Fulton	1886
Crawford, G. G. (V-P.)	Atlanta	Fulton	1859
Divine, K. C	Atlanta	Fulton	1882
Duncan, J. W	Atlanta	Fulton	1883
Earnest, J. G	Atlanta	Fulton	1882
Elkin, W. S	Atlanta	Fulton	1882
Evans, W. W	Oxford,	Newton	1872
Faver, Paul	Fayetteville.	Fayette	1873
Gaither, Henry	Oxford	Newton	1851
Gaston, J. McF	Atlanta	Fulton	1884
Gray, James A. (S.)	Atlanta	Fulton	1882
Gwyn, J. P	High Shoals	Walton.	1883
Hamilton, J. L	Stone Mountain	KeKalb	1859
Hardon, Virgil O	Atlanta.	Fulton	1886
Hobbs, A. G	Atlanta	Fulton	1882

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.
Howell, D. H	Atlanta	Fulton	1878
Jarnagin, W. C	Atlanta	Fulton	1882
Lallersted, T. L	Panola	DeKalb	1868
Logan, J. P. (P.)	Atlanta	Fulton	1858
Love, Wm. Abram (V.-P.)	Atlanta	Fulton	1866
Miller, H. V. M	Atlanta	Fulton	1851
Mitchell, T. J	Griffin	Spalding	1884
Moore, W. C	Clarkston	DeKalb	1861
Nash, D. T	Lovejoy	Clayton	1877
Nicolson, W. P	Atlanta	Fulton	1883
Noble, G. H	Atlanta	Fulton	1883
O'Brien, F. H	Atlanta	Fulton	1882
Olmsted, J. C	Atlanta	Fulton	1886
Parks, W. B	Atlanta	Fulton	1882
Perry, A. C	Covington	Newton	1878
Pinson, A. J	Lithonia	DeKalb	1878
Pool, E. W. H	Douglasville	Douglas	1883
Powell, T. S. (V.-P.)	Atlanta	Fulton	1857
Roach, E. J	Atlanta	Fulton	1857
Roach, E. W	Atlanta	Fulton	1882
Roy, G. G	Atlanta	Fulton	1878
Scott, H. F. (O.)	Atlanta	Fulton	1879
Selman, J. L	Douglasville	Douglas	1882
Stirling, W. L	Atlanta	Fulton	1878
Taliaferro, V. H. (V.-P.)	Atlanta	Fulton	1857
Taylor, R. H	Griffin	Spalding	1879
Todd, J. S. (O., C.)	Atlanta	Fulton	1872
Westmoreland, W. F. (P.)	Atlanta	Fulton	1856
Westmoreland, Jr., W. F	Atlanta	Fulton	1886
Whitley, T. R	Douglasville	Douglas	1882
Wile, Henry	Atlanta	Fulton	1886
Word, R. C	Atlanta	Fulton	1855

SIXTH DISTRICT.

Alexander, L. B. (V.P.)	Forsyth	Monroe	1877
Barron, R. B	Clinton	Jones	1884

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.
Blackshear, J. Emmett	Macon	Bibb	1866
Brown, R. M.	Toombsboro	Wilkinson	1882
Callaway, J. A	Milledgeville	Baldwin	1882
Cotter, R. O	Macon	Bibb	1882
Denson, E. J	Bullards	Twiggs	1884
Duggan, J. H	Stephensville	Wilkinson	1884
Ferguson, E. G.	Macon	Bibb	1882
Gewinner, N. G	Macon	Bibb	1884
Gibson, W. C	Macon	Bibb	1884
Hall, Charles H. (C.)	Macon	Bibb	1870
Hall, Kenan	Macon	Bibb	1881
Hammond, D. W. (V.-P.)	Macon	Bibb	1857
Harris, I. L.	Milledgeville	Baldwin	1885
Head, J. M.	Zebulon	Pike	1883
Heard, J. H	Walden	Bibb	1884
Holt, W. F. (V.-P., P.)	Macon	Bibb	1867
Howard, H. L.	Macon	Bibb	1884
Johnson, J. C	Macon	Bibb	1875
Jones, L. M	Milledgeville	Baldwin	1880
Jordan, M. G. W	Culloden	Monroe	1874
Kenan, Thomas H. (V.-P.)	Milledgeville	Baldwin	1875
King, W	Irwinton	Wilkinson	1884
Lancaster, J. F.	Walden	Bibb	1884
McHatton, H.	Macon	Bibb	1883
Moore, K. P. (V.-P., O., T., P.)	Macon	Bibb	1871
O'Daniel, M. H. (O.)	Milledgeville	Baldwin	1882
O'Daniel, William (T., P.)	Bullards	Twiggs	1870
Ponder, W. P.	Forsyth	Monroe	1885
Powell, T. O. (P.)	Milledgeville	Baldwin	1867
Rosser, W. A.	Bolingbroke	Monroe	1884
Slappey, J. G	Westlake	Twiggs	1878
Stevens, J. P	Macon	Bibb	1873
Toole, W. J.	Macon	Bibb	1884
Winchester, W. R.	Macon	Bibb	1884
Whitaker, J. M.	Milledgeville	Baldwin	1881

NAME.	POST OFFICE.	COUNTY.	ADMITTED.
Williams, H. J. (o.)	Macon	Bibb	1883
Wright, P. H	Macon.	Bibb	1869

SEVENTH DISTRICT.

Anderson, R. B.	Roswell	Cobb	1872
Battey, H. H.	Rome	Floyd	1882
Battey, Robert (c., p.)	Rome	Floyd	1859
Battle, R. J.	Cass Station	Bartow	1879
Bivings, J. C.	Dalton	Whitfield	1873
Calhoun, F. R. (v.-p.)	Euharlee	Bartow	1873
Clements, J. W.	Subligna	Chattooga	1877
Culberson, W. A.	Cave Spring	Floyd	1850
England, W. G.	Cedartown	Polk.	1886
Gordon, C P.	Dalton	Whitfield	1861
Greene, J. G.	Rockmart	Polk.	1879
Holmes, G. W. (v-p., p., c.)	Rome	Floyd	1867
Holmes, J. B. S.	Rome	Floyd	1872
Holmes, T. M.	Rome	Floyd	1883
Hoyt, W. D.	Rome	Floyd	1871
Humphries, J. R.	Acworth	Cobb	1876
Janes, J. W.	Rome	Floyd	1879
Kendrick, W. S. (o.)	Dirttown.	Chattooga	1874
Matthew, J. C.	Rogers	Bartow	1886
Quinn, M.	Norton	Whitfield	1883
Richardson, E. H., Jr. (o., c, v.-p.)	Cedartown	Polk	1878
Robertson, S.	Dallas.	Paulding	1881
Shaw, T. M.	Coosa.	Floyd	1878
Wells, W. B. (c., v-p.)	Red Clay	Whitfield	1873
Wright, A. W.	Cave Spring	Floyd	1879

EIGHTH DISTRICT.

Alfriend, E. D.	Sparta	Hancock	1884
Anderson, D. E.	Madison	Morgan	1883
Bell, A. A.	Madison	Morgan	1858
Benedict, Samuel C.	Athens	Clarke	1883

NAME.	POST OFFICE.	COUNTY.	ADMITTED.
Brawner, W. M	Lexington	Oglethorpe	1883
Burt, A. Moody	Sparta	Hancock	1883
Carlton, W. A	Athens	Clarke	1883
Deadwyler, M. P. (v-p.)	Elberton	Elbert	1868
Fortson, T. S	Washington	Wilkes	1886
Gerdine, John (c.)	Athens	Clarke	1882
Goss, I. H	Fort Lamar	Madison	1877
Hale, E. M	Osceola	Oconee	1883
Hill, J. J	Washington	Wilkes	1880
Hollingsworth, W T	Madison	Morgan	1857
Kennebrew, Henry	Athens	Clarke	1883
Lane, J. A	Washington	Wilkes	1880
McClesky, G. L	Athens	Clarke	1857
Mulligan, G. W. (v.-p.)	Washington	Wilkes	1883
Nisbet, R. B	Eatonton	Putnam	1853
Pope, J. E	Athens	Clarke	1876
Stovall, A. S. J	Elberton	Elbert	1886
Wade, R. M	Athens	Clarke	1882

NINTH DISTRICT.

Bailey, J. W	Gainesville	Hall	1861
Hardman, L. G	Harmony Grove	Jackson	1877
Harris, R. L	Harmony Grove	Jackson	1883
Neal, W. A	Banksville	Banks	1883
Pendergrass, J. B	Jefferson	Jackson	1883
Watson, W. A	Jefferson	Jackson	1883

TENTH DISTRICT.

Allen, J. E	Augusta	Richmond	1880
Baker, A. H	Augusta	Richmond	1876
Baxley, W. H	Hephzibah	Richmond	1886
Barnett, J. W	Raytown	Taliaferro	1880
Battey, W. W	Augusta	Richmond	1876
Brantley, S. D	Sandersville	Washington	1849
Campbell, A. Sibley (o., s.)	Augusta	Richmond	1876

NAME.	POST OFFICE.	COUNTY.	ADMITTED.
Campbell, H. F. (o. v-p., p.)	Augusta	Richmond	1851
Carswell, A. W	Herndon	Burke	1876
Davis, J. P	Tennille.	Washington	1886
Doughty, W. H. (c)	Augusta	Richmond	1857
Doughty, W. H., Jr	Augusta	Richmond	1880
Dugas, George C	Augusta	Richmond	1880
Flanders, J. W	Wrightsville	Johnson.	1884
Ford, DeSaussure (v-p., p.)	Augusta	Richmond	1857
Foster, Eugene (v-p., c., p.)	Augusta	Richmond	1875
Gay, D. E	Sidney	Emanuel	1875
Gercke, R. O	Augusta	Richmond	1876
Goodrich, E. C. (t.)	Augusta	Richmond	1876
Green, J. E	Augusta	Richmond	1886
Hatton, Joseph	Groveton	Columbia	1876
Hatch, M. G	Tennille	Washington	1883
Harrison, Jr,. W. H	Augusta	Richmond	1886
Henderson, J. R	Sun Hill	Washington	1884
Hickman, C. W	Augusta	Richmond	1880
Hitt, V. G	Augusta	Richmond	1870
Holliday, W. Z	Harlem	Columbia	1884
Hull, J. M	Augusta	Richmond	1882
Kelley, J. M	Louisville	Jefferson	1885
Kelly, T. J	Tennille	Washington	1884
Lamb, Theodore	Augusta	Richmond	1886
Lane, E. W	Scarboro	Scriven	1885
Mathis, A. A	Sandersville.	Washington	1872
Morgan, Jas. B	Augusta	Richmond	1886
Roberts, J. B. (v-p.)	Sandersville	Washington	1875
Sego, J. T	Augusta	Richmond	1885
Smith, Hiram	Augusta	Richmond	1876
Smith, H. H	Augusta	Richmond	1886
Spier, C. P	Wadley	Jefferson.	1886
Steiner, H. H	Augusta	Richmond	1857
Usry, F. M	Dearing	McDuffie	1886
Walker, J. L	Wrightsville	Johnson	1884

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.
Whitehead, A. G. (V-P.)	Waynesboro	Burke	1869
Winkler, Geo. H	Augusta	Richmond	1886
Wilcox, G. A	Augusta	Richmond	1886
Wright, J. D	Louisville	Jefferson	1884
Wright, Thomas R	Augusta	Richmond	1880

NON-RESIDENTS.

Earle, E. P	Birmingham	Alabama	1882
Haynes, M		Indian Ter'ry	1879
Ilyus, E. B	Lancaster	Pennsylvania	1884
Johnson, J. Thad. (O., S., P.)	Etna	California	1871
Mitchell, D L	Cassville	Missouri	1879
Quillian, C. C	Garrison	Texas	1884
Roach, J. E	Sipes Springs	Texas	1882
Shi, A. H	Hawthorn	Florida	1860

IN MEMORIAM.

In Memoriam.

☞ SPECIAL REQUEST TO EVERY MEMBER.—The Secretary *earnestly requests each member of the Association* to aid him *in filling* THE BLANKS in the following Roll of Deceased Members *by making the necessary inquiries* in their respective cities and counties, *and writing him at once* on obtaining the desired information.

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.	DIED.
Adams, C. B.	Augusta	Richmond	1868	1875
Alexander, J. R.		Floyd	1849	
Arnold, R. D. (V.-P., P.)	Savannah	Chatham	1849	1876
Avery, J. C.	Decatur	DeKalb	1859	1873
Banks, J. T. (V.-P. P.)	Spalding	Griffin	1858	1880
Barkwell, T. J	Hawkinsville	Pulaski	1859	
Battle, H. L.	Russellville	Monroe	1849	
Bell, T. W.	Busbyville	Houston	1853	
Bignon, H. A	Augusta	Richmond	1852	1870
Billing, S. A	Columbus	Muscogee	1855	1872
Black, R. C. (T.)	Augusta	Richmond	1852	1860
Bomar, B. F	Atlanta	Fulton	1859	
Boswell, S. J. (V.-P.)	Columbus	Muscogee	1855	
Bothwell, D. J	Vienna	Dooly	1849	
Bozeman, J. F	Atlanta	Fulton	1855	1877
Brandon, D. S.	Thomasville	Thomas	1873	1878
Broadhurst, W. W.	Augusta	Richmond	1852	1861
Bruce, R. J.	Thomasville	Thomas	1874	1880
Bunn, William	Wilna	Houston	1854	
Burgess, Wm. R. (T., O.)	Macon	Bibb	1870	1878
Burney, S. W. (P.)				1876
Campbell, Robert.	Augusta	Richmond	1849	1885
Carroll, J. C.	Laurens Hill	Laurens	1857	1870

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.	DIED.
Carroll, R. C	Augusta	Richmond	1873	1882
Castlen, F. G	Macon	Bibb	1867	1874
Carlton, J. M	Athens	Clarke	1882	1883
Charters, W. M. (P.)	Savannah	Chatham	1851	1883
Chase, D. S	Augusta	Richmond	1852	
Clark, S. B.	Richmond Fact'ry.	Richmond	1852	
Coe, J. N	Flat Rock	Pike	1856	
Colley, F. S. (P.)	Monroe	Walton	1856	
Cooper, G. F. (C. S., V.-P.)	Americus	Sumter	1849	1882
Copeland, A. B	Hamilton	Harris	1878	1882
Cornwall, G. H	Hillsboro	Jasper	1854	
Crawford, S. S	Augusta	Richmond	1857	
Crump, E. D	Herndon	Burke	1872	1881
Cumming, H. M	Augusta	Richmond	1868	1872
Cunningham, L. S	Big Creek	Forsyth	1859	1862
Cunningham, W. D	Jasper	Pickens	1859	1866
D'Alvigney, N	Atlanta	Fulton		1877
Davenport, C. W	Point Peter	Oglethorpe	1852	
Davenport, H. S	Calhoun	Gordon	1859	
Davis, W. L	Albany	Dougherty	1849	
Dean, S. H	Conyers	Rockdale	1856	
Dearing, W. E	Augusta	Richmond	1852	1867
DeCortez, C. A	Savannah	Chatham	1872	
Dickinson, J. T	Albany	Dougherty	1857	
Dickinson, R. Q. (V.P., P.)	Albany	Dougherty	1850	
Dugas, L. A. (P.)	Augusta	Richmond	1852	1884
Dupree, L. J	Camilla	Mitchell		
Eve, Jos. A	Augusta	Richmond	1852	1886
Eve, S. C.	Augusta	Richmond	1868	1884
Felder, W. L	Augusta	Richmond	1857	1867
Fish, J. D. (T.)	Savannah	Chatham	1875	1879
Fitzgerald, E	Macon	Bibb	1882	1885
Ford, L. D	Augusta	Richmond	1849	1884
Fort, Moses T	Hawkinsville	Pulaski	1859	1878
Franklin, M. A	Macon	Bibb	1849	1858
Frazier, W. M	Hawkinsville	Pulaski	1850	

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.	DIED.
Gaither, B. T.	Oxford	Newton	1852	1853
Gardner, J. W.	Augusta	Richmond	1857	
Girardey, Edward	Augusta	Richmond	1852	1859
Gordon, J. M.	Savannah	Chatham	1849	
Gray, S. H.	Barnesville	Pike	1871	1885
Green, A. B.	Pond Town	Sumter	1849	
Green, H. K.	Macon	Bibb	1849	1867
Green, Thomas F.	Milledgeville	Baldwin	1849	1879
Gregory, J. D.		Sumter	1849	
Grimes, T. W.	Columbus	Muscogee	1855	1882
Habersham, J. C.	Savannah	Chatham	1853	
Habersham, J. C., Jr. (V.-P.)	Savannah	Chatham	1866	1881
Habersham, S. E	Eatonton	Putnam	1870	
Harden, W. P.	Harmony Grove	Jackson	1853	1885
Harrell, W. J.	Bainbridge	Decatur	1874	1881
Harris, S. N. (V.-P.)	Savannah	Chatham	1851	1854
Harrison, Gabriel	Macon	Bibb	1862	
Harriss, Juriah (O., V.-P.)	Savannah	Chatham	1852	1876
Hart, A. C.	Waynesboro	Burke	1852	
Hawes, E. C.	Appling	Columbia	1852	
Heard, T. O.	Griffin	Spalding	1867	
Hendrick, J. B.	Covington	Newton	1857	1881
Henry, G. C.	West Point	Troup	1872	
Hook, E. B.	Augusta	Richmond	1857	1862
Hoxey, Thomas	Columbus	Muscogee	1849	1853
Hunter, E. H. W.	Louisville	Jefferson	1857	1883
Ingraham, E. P.	Albany	Dougherty	1870	1873
Irvine, Robert	Augusta	Richmond	1880	1881
Johnson, C. W.	Macon	Bibb	1870	1875
Johnson, John M.	Atlanta	Fulton	1866	1886
Jones, B. O.	Atlanta	Fulton		
Jones, J. W.	Atlanta	Fulton	1857	1871
Kirkscey, E. J. (V.-P.)	Columbus	Muscogee	1871	1877
Kollock, P. M. (P.)	Savannah	Chatham	1852	1872
Lamar, T. R. (V.-P.)	Macon	Bibb	1849	1859
Lightfoot, W. S.	Macon	Bibb	1849	1864

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.	DIED.
Lockhart, R. H.	Columbus	Muscogee	1855	1859
Long, Crawford W.	Athens	Clarke	1849	1878
Lumpkin, George	Maxey's Depot	Oglethorpe	1859	
Lumpkin, S. P.	Watkinsville	Clarke	1859	
Mackie, J. D.	Augusta	Richmond	1852	1854
Maffit, R. G. W.	Dalton	Whitfield	1859	
Mathews, W. D.	Fort Valley	Houston	1884	1885
McBride, W. G.	Oconee	Washington	1850	1873
McGoldrick, R.	Macon	Bibb	1849	1853
McKinley, C. A.	Newnan	Coweta	1859	
McMillan, J. E.	Columbus	Muscogee	1872	1883
Means, A. (v.-p.)	Oxford	Newton	1851	1883
Means, O. S.	Oxford	Newton	1857	
Meiere, William S.	Madison	Morgan	1857	
Milam, R. J.	Fairburn	Campbell	1882	1882
Morrison, D. H.	Savannah	Chatham	1868	1869
Musgrove, W. C. (c. s.)	Midville	Burke	1849	1876
Nash, R. A.	Marion	Twiggs	1849	
Nisbet, R. H.	Eatonton	Putnam	1854	1873
Nottingham, C. B. (s., t., c., p.,)	Macon	Bibb	1849	1875
Nunn, R. M.	Savannah	Chatham	1871	1873
Ogilby, H. J. (v.-p.)	Madison	Morgan	1849	1873
O'Keefe, D. C. (s.)	Atlanta	Fulton	1852	1871
Orme, L. H. (s.)	Atlanta	Fulton	1866	1872
O'Sullivan, ——	Cork	Lee	1849	
Owen, J. D.		Baldwin	1850	
Parsons, J. M.	Russellville	Monroe	1845	
Pitts, G. W.	Star	Butts	1859	
Posey, J. F	Savannah	Chatham	1851	
Pringle, W	Covington	Newton		
Ragan, Isham H.	Palmyra	Lee	1856	
Raines, Thomas	Atlanta	Fulton	1872	1883
Raines, T. L.	Atlanta	Fulton	1882	1884
Rauschenberg, Christian	Atlanta	Fulton	1861	1878
Richardson, C. P.	Savannah	Chatham	1851	1853
Ridley, R. A. T. (v.-p.)	LaGrange	Troup	1859	1871

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.	DIED.
Robertson, J. J.	Washington	Wilkes	1852	1872
Roddy, R. L. (V.-P.)	Forsyth	Monroe	1849	1878
Ruffin, W. R.	Augusta	Richmond	1852	
Russell, W. J.	Lawrenceville	Gwinnett	1861	
Ryan, T. D. L.	Hawkinsville	Pulaski	1859	1876
Safford, S. J.	Madison	Morgan	1856	1859
Searcy, D. B.	Bolingbroke	Monroe	1849	1885
Shropshire, J. W.			1871	
Simmons, J. N.	Atlanta	Fulton	1850	1871
Simmons, J. S.	Gainesville	Hall	1873	1881
Simmons, S. B.	Augusta	Richmond	1852	1867
Simmons, T. A.	Irwinton	Wilkinson	1871	1872
Smith, A. D.	Montezuma	Macon	1871	
Smith, C. W.	Jonesboro	Clayton	1859	
Smith, R. M. (C.)	Athens	Clarke		1879
Smith, Thomas	Savannah	Chatham	1858	1876
Spier, W. A.	Grantville	Coweta	1859	
Stallings, J. D.	Preston	Webster	1871	
Stanford, F. A.	Columbus	Muscogee	1849	1885
Starr, E. P.	Savannah	Chatham	1868	1873
Steele, H.	Knoxville	Crawford	1849	
Steele, R. T.	Fairburn	Campbell	1849	
Stephens, W. B.	Forsyth	Monroe	1849	
Stewardson, Thomas	Savannah	Chatham	1849	
Stozier, L. L.	Albany	Dougherty	1867	
Sutton, C. B.		Lee	1856	
Taylor, E. T.	Columbus	Muscogee	1855	
Taylor, R. N.	Hawkinsville	Pulaski	1850	
Thomas, J. G., (V.-P., C., T.)	Savannah	Chatham	1867	1885
Thompson, Charles	Macon	Bibb	1849	1854
Trammell, A. A.	Forsyth	Monroe	1856	
Underwood, J. B.	Cave Spring	Floyd	1860	1881
Van Meter, J. N.	Euharlee	Bartow	1879	1881
Wall, W. W.	Calhoun	Gordon	1860	
Ware, A. E. O.			1859	
Wells, C. H.	Savannah	Chatham	1853	1854

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.	DIED.
West, Charles (P.)	Perry	Houston	1849	
West, C. W.	Savannah	Chatham	1853	1859
White, S. G. (V.-P.)	Milledgeville	Baldwin	1868	1877
Whitlock, Isaac W.	Washington	Wilkes	1852	1853
Wiley, J. B.	Macon	Bibb	1849	
Williams, T. L.		Dooly	1849	
Williams, W. L.	Fayetteville	Fayette	1873	1878
Willingham, Willis	Lexington	Oglethorpe	1849	1872
Winn, G. A.	Bolingbroke	Monroe	1849	1862
Wirsen, G. F.	Rutledge	Morgan	1871	1884
Woodson, C. T.	Wilna	Houston	1854	
Wooten, W. H.	Lexington	Oglethorpe	1852	1860
Wragg, J. A.	Savannah	Chatham	1853	
Yonge, Easton	Savannah	Chatham		1880

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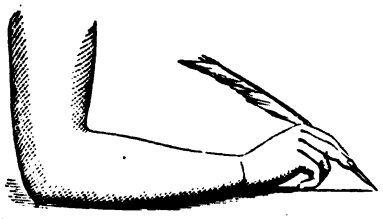

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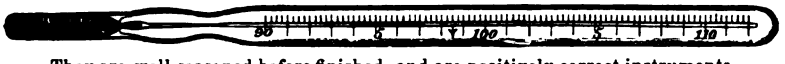

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